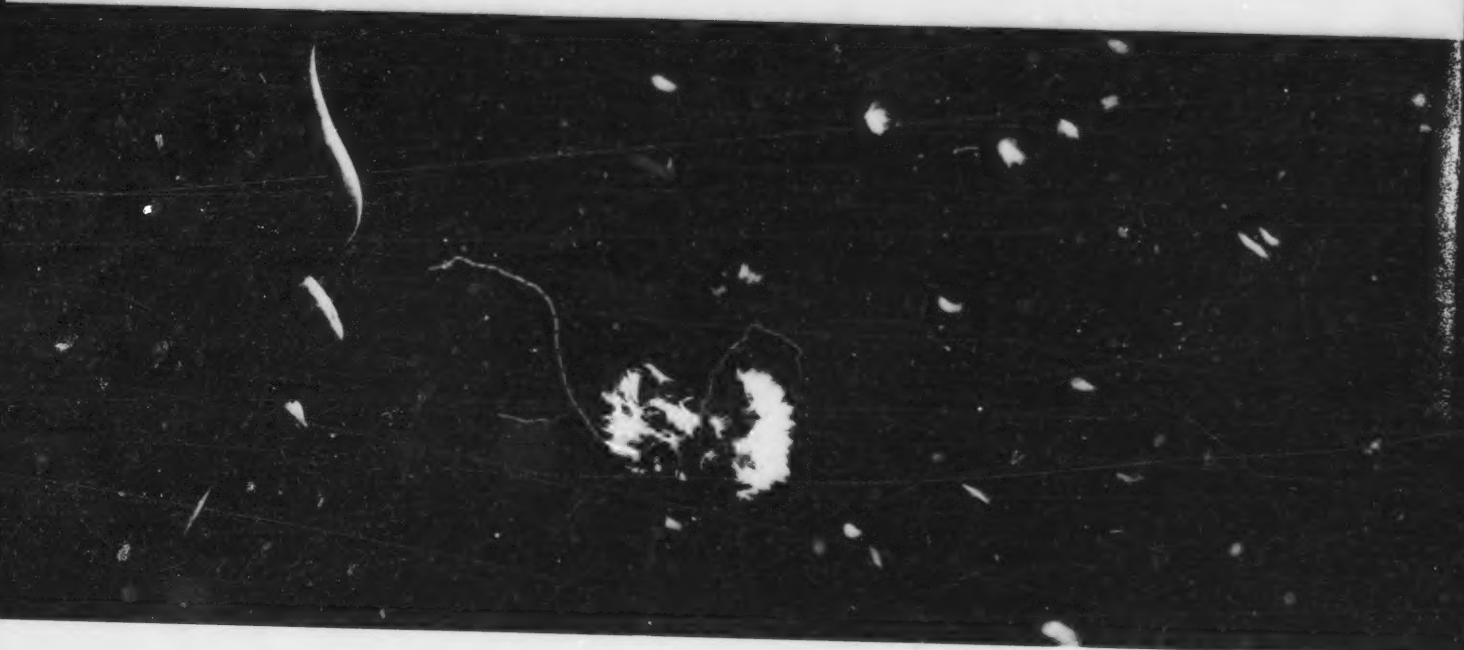

# THE JOURNEY TO SUSTAINABILITY

## TRIPLE BOTTOM LINE REPORT | 2001

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BC hydro

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## CORPORATE PROFILE

BC Hydro is the third largest electrical utility in Canada. We are owned by the Province of British Columbia, and are one of North America's leading providers of clean, renewable hydropower. Our skilled workforce of approximately 5900 people is responsible for generating and delivering electricity and for developing products and services, for nearly 1.6 million customers in B.C.

In 2000, BC Hydro met 91 per cent of customer demand with hydroelectricity. Our total energy portfolio was 51 338 gigawatt hours (GW.h), which included power generated at our plants and energy purchased from Independent Power Producers (IPPs).

We generated electricity from 30 hydro installations, from three thermal-generating plants that operate to augment hydroelectricity production when water levels are low, and from a small number of diesel-generating stations that provide local power in remote areas of B.C. Our 99.7 per cent reliability record is among the best in the business – our service outages average two hours in duration.

We own over 74 000 kilometres of transmission and distribution lines to carry power to users, plus a network of customer call centres and energy-use information outlets to respond to product and service enquiries.

## CORPORATE STRUCTURE AND SUBSIDIARIES

BC Hydro has operating units that produce and deliver electricity to 1.6 million customers in B.C., and operating units that provide products and services to meet our customers' needs. These business units are supported by a number of corporate service groups.

We also have four subsidiary companies:

- Westech Information Systems, which provides information technology and business consulting services to utilities, government agencies and medium- to large-sized companies throughout North America;
- Powerex, which is responsible for buying, selling and exchanging electricity in the utility marketplace, and for purchasing electricity for BC Hydro's domestic use;
- Powertech Labs, which provides testing, consulting and research services to the electrical and natural gas industries, their customers and suppliers; and
- BC Hydro International Limited, which exports technical assistance to off-shore clients seeking power services and electric power project development, operations and maintenance expertise.

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Our mission is to provide integrated energy solutions to our customers in an environmentally and socially responsible manner. In other words, to provide power in a way that is sustainable in the long term. We believe it is essential not only to make a profit, but also to care about people and protect the environment – and to be accountable for all three. We call it our "Triple Bottom Line."

Welcome to BC Hydro's third annual Triple Bottom Line Report, documenting our most recent steps towards our goal of being North America's leading sustainable energy company. I am pleased to report we are making progress in our journey towards sustainability, and are confident the right conditions are being created for success to continue.

Last year, BC Hydro formally adopted sustainability as the driving force of our business. Becoming sustainable means we must continue to excel in areas of fundamental strength – BC Hydro's base of clean, renewable hydropower, our healthy finances, the strong relationships we have developed across the province and the company's excellent reputation for environmental stewardship – and build core competencies across our three bottom lines. Becoming sustainable also means improving or accelerating progress in areas where we know we must do better. For example, building a strong and capable organization, consulting more effectively with employees and external stakeholders, setting targets for our Triple Bottom Line performance, improving our eco-efficiency and making more decisions using sustainability frameworks as our guide are areas we will focus on over the next few years. In short, we can become sustainable not by doing something new but by directing our existing strengths towards different goals.

Significant progress is underway, and is discussed on the following pages of this year's report. We have taken firm steps to acquire more energy from green sources that are renewable, environmentally friendly, socially responsible and licensable. Until the day greener sources become more widely available and reasonably priced, we also have strengthened existing BC Hydro commitments to reduce the greenhouse gas emissions that come with new natural gas generation. At the same time, we continue to engage stakeholders throughout B.C. in Water Use Plan processes to ensure consensus on allocating water resources for power generation and other uses.

While much work remains to be done, I expect BC Hydro's core strengths – our hydropower base, good financial health, excellent environmental record and our determination to improve and excel – will carry us a long way towards sustainability. We are serious about achieving an optimum balance of environmental, social and economic considerations in everything we do, because it's the right thing to do. The journey towards sustainability is good for business, for people and for the planet.

I invite you to review our most recent progress on the following pages, and to contact me if you have comments or concerns about our performance.

Sincerely,

Michael Costello
*President and Chief Executive Officer*

# EXECUTIVE
## SUMMARY

BC Hydro has adopted sustainability as the driving force of our business and as a result, we are aiming to become one of the leading sustainable energy companies in North America. We start from a good position: our business is founded on clean, renewable hydropower, we have an excellent reputation as environmental stewards, and our finances are healthy.

The challenges we face to become sustainable, and the progress we have made to date, are discussed in greater detail in the following pages of this document, which covers the period from April 1, 2000 to March 31, 2001. Readers may also wish to refer to BC Hydro's 2001 Annual Report for additional details about the company's business performance over the same period.

Last year, we developed the Sustainability Action Plan (SAP) to move us closer to our goal. SAP is providing more than $100 million in additional funding over the next three years in order to build core strengths across our social, economic and environmental bottom lines.

SAP elements include focusing on green and renewable energy resources, conservation, thermal emission offsets, social contributions, employee involvement and financial performance. We are paying significant attention to building a strong and capable organization. For example, market conditions and demographic trends indicate that we must do a better job of attracting and retaining skilled employees.

Further, since we know greater short-term reliance on thermal resources will negatively influence our GHG emissions profile, we must consider our use of gas-fired technology as an energy "bridge" to greener sources of power now being developed.

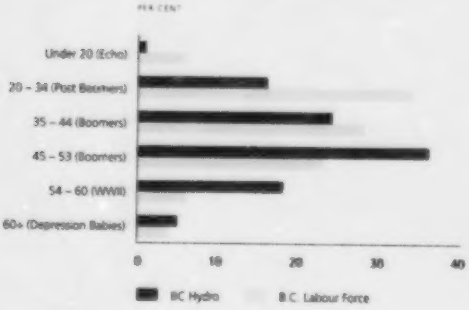
SAP Initiatives are featured throughout the report, and program objectives and milestones are captured in the Appendices located in the back of this report.

Our 2001 Triple Bottom Line Report has been prepared, as much as possible, in accordance with the recently developed Global Reporting Initiative (GRI) principles and guidelines on economic, environmental and social performance. We continue to develop indicators to track our progress towards sustainability, including several indicators being prepared this year to measure the effectiveness of newly initiated SAP programs, and which will be available for publication in next year's report.

Selected indicators in this summary provide a snapshot of our 2000/2001 Triple Bottom Line performance. More complete details continue on the following pages.

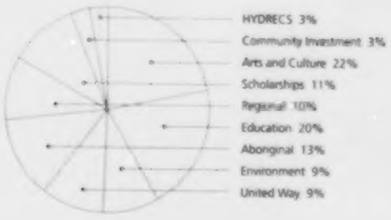
## SOCIAL BOTTOM LINE

### AGE DISTRIBUTION – 2000



Data Source: RMHR May 2000; 1999 Strategic Projections Inc.

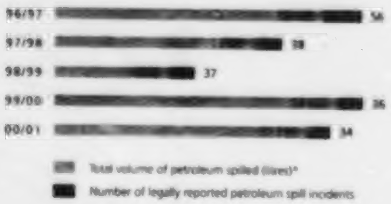
### CORPORATE AND REGIONAL DONATIONS



In 2000/2001 we provided $3 million to over 500 non-profit organizations in B.C.

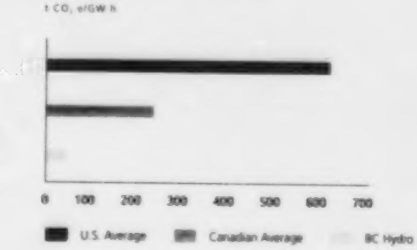
## ENVIRONMENTAL BOTTOM LINE

### TOTAL VOLUME OF PETROLEUM AND OIL SPILLED AND NUMBER OF LEGALLY REPORTABLE SPILL INCIDENTS



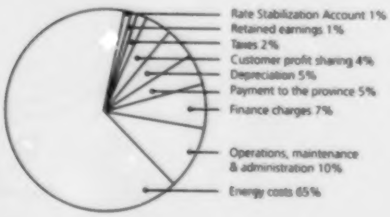
*Note: Volume of oil and petroleum spills are field estimates only.

### GHG INTENSITIES (PER UNIT OF ELECTRICITY GENERATED)

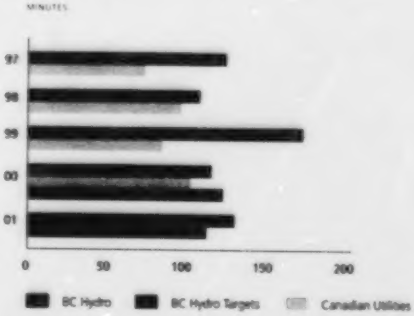


## ECONOMIC BOTTOM LINE

### ALLOCATION OF REVENUE



### CUSTOMER AVERAGE INTERRUPTION DURATION INDEX (RELIABILITY OF SERVICE)

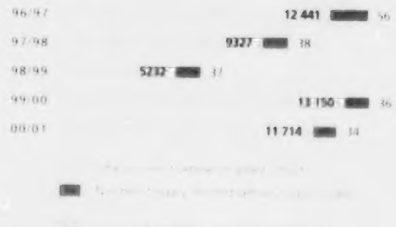


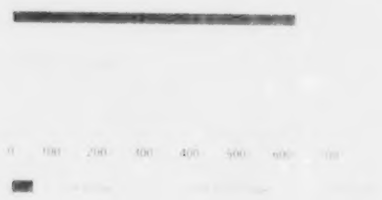
Canadian Utilities' data is for calendar year end, i.e., 1999 relative to 2000 for BC Hydro. Canadian Utilities' data for 1999 excludes ice storm in Quebec and Ontario. Including ice storm, CAIDI would be 508 minutes.

# SOCIAL BOTTOM LINE

# ENVIRONMENTAL BOTTOM LINE

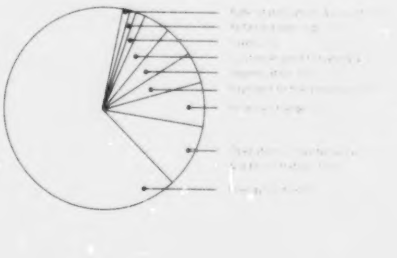
TOTAL VOLUME OF PETROLEUM AND OIL SPILLED
AND NUMBER OF LEGALLY REPORTABLE SPILL INCIDENTS

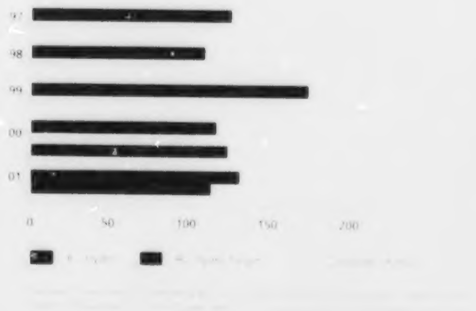




# ECONOMIC BOTTOM LINE

ALLOCATION OF REVENUE





# SUSTAINABILITY

# OUR CORPORATE

## DIRECTION

Sustainability is broadly accepted to mean the state where demands placed on the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations.

Last year BC Hydro recognized sustainability as the core of our business, becoming one of only a handful of companies and organizations on this planet who have actively committed to balancing social, economic and environmental considerations in everything they do.

At BC Hydro, sustainability means we intend to operate forever. It is the best way to grow our business.

INTEGRATION

# COMMITMENT

## TO SUSTAINABILITY

The decision to adopt the principles of sustainability as the driving force of our business was endorsed by our senior executives and ratified by our Board of Directors in December 2000.

The commitment to sustainability reflects BC Hydro's consideration of environmental, social and economic factors influencing our business, and strategies we have developed to ensure the company's success across all three bottom lines.

Our role is to provide reliable energy supplies for the province's homes, businesses and industry; to generate the profits necessary for our continued operation and the benefit of society; and to shepherd our energy resources to serve the province in perpetuity.

Our goal is to become the leading sustainable energy company in North America by building on our solid base of clean, renewable hydropower, and by embarking on a series of new ventures designed to:

- strengthen our portfolio of green and renewable energy resources;
- embrace a strong conservation ethic;
- offset emissions from thermal generation;
- make a significant social contribution;
- encourage employee innovation; and
- continue our strong financial performance.

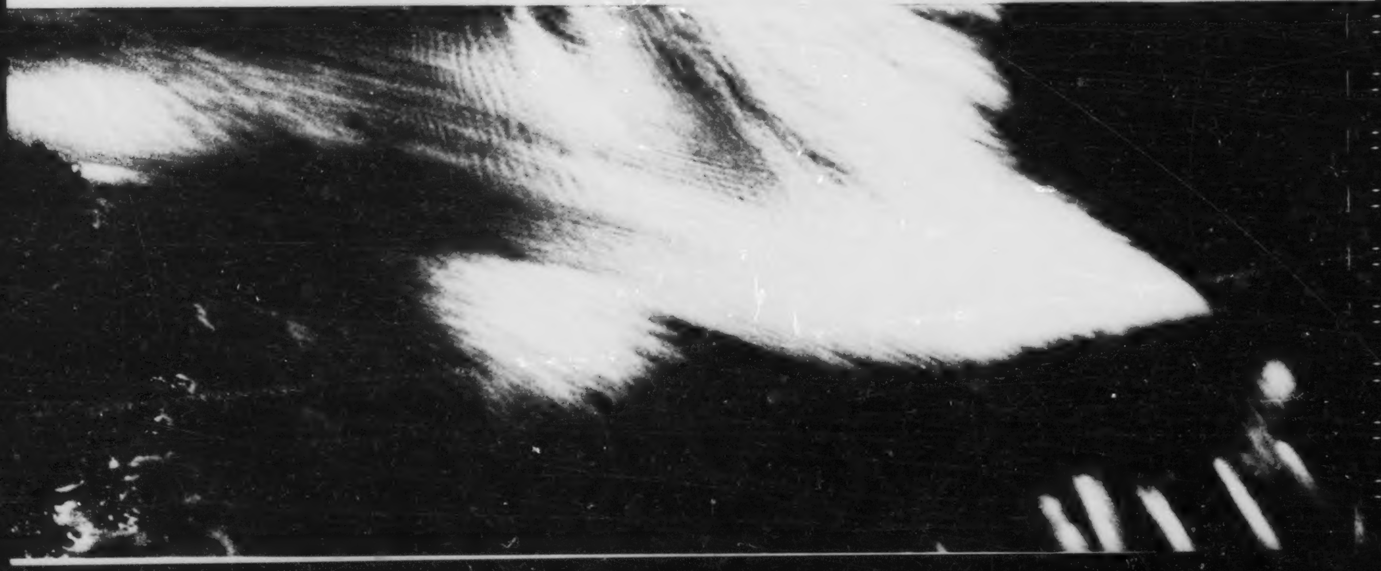
We believe that being sustainable is good for business, for people and for the planet. We want to be able to operate indefinitely, generating electricity and profits that build strong, livable communities for all British Columbians.

### BECOMING SUSTAINABLE

BC Hydro is already well-positioned to become a sustainable energy company: over 90 per cent of the electricity we provide is renewable hydropower; we enjoy ongoing profits; public support for our activities is broad and deep; and our environmental record is strong.

Our position improved even more last year with the development of a Sustainability Action Plan (SAP), providing more than $100 million in additional funding over the next three years for more than 20 tightly defined efforts in six key areas of our business:

- new technology;
- environmental initiatives;
- new products and services;
- social initiatives;
- planning and consultation; and
- employee initiatives.



Our focus on sustainability is a clarification of where we are headed, not a fundamental change to what we are doing. It provides an enduring, powerful and meaningful objective for the corporation, as well as a focus and framework to build on our existing strengths, and addresses the challenges facing our business.

## MOVING AHEAD

Sustainability means we must become better at the things we already do well, including optimizing the use and health of our energy assets; protecting and enhancing electricity trade; building on our hydroelectric potential; focusing on customer service; building results-oriented relationships with employees and other stakeholders; bringing focus and direction to our contributions to society; protecting the environment; practicing eco-efficiency; and offsetting our greenhouse gas emissions.

Sustainability also means BC Hydro will have to seize new opportunities to harness green energy sources for domestic supply or export; pursue sustainable business ventures such as hydrogen and fuel cell development; expand our Power Smart programs for residential customers; and extend demand-side management initiatives for commercial and industrial accounts.

Most of all, however, sustainability means we must become a culture determined to be innovative in order to create value.

We will have to recruit more highly skilled staff to succeed our aging personnel, and ensure that employees and the company work together to create a customer-focused company. Employees are the base of our strength, and lead all advances towards a brighter energy future.

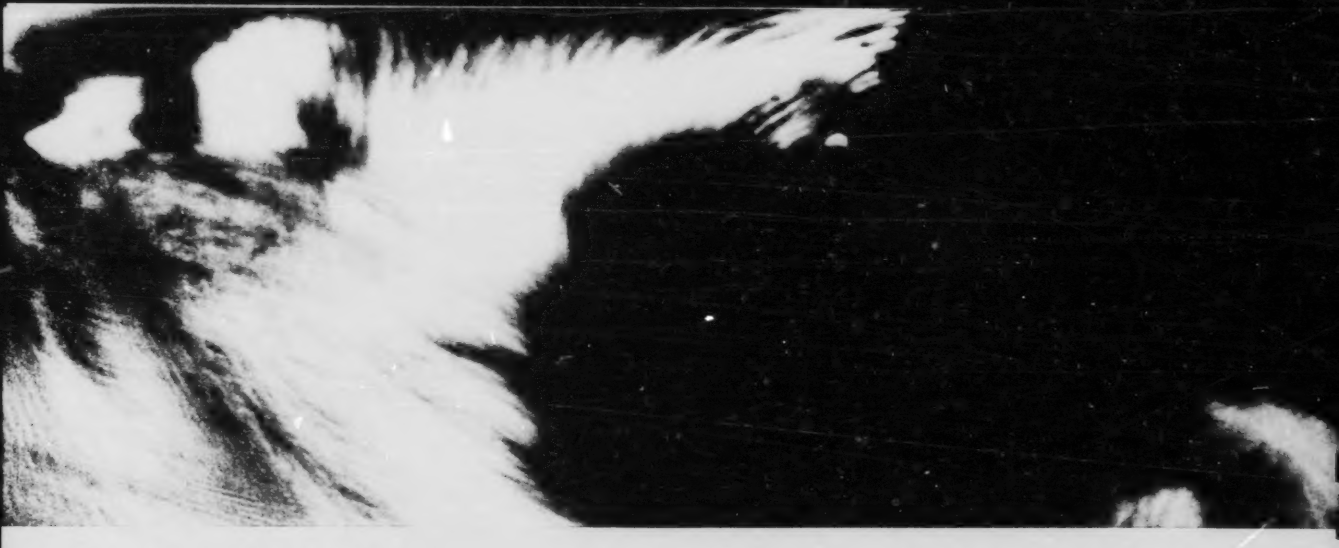
While pursuing innovative ways to transform our business, we must not lose sight of our fundamental attributes – especially our reputation for solid, day-to-day operational effectiveness.

Another significant challenge to a sustainable future for BC Hydro is the mix of energy resources used to meet customer demand. Environmental, social and economic considerations indicate that additions to our supply portfolio will most likely be thermal, not hydropower. Thermal generation increases our GHG emissions and contributes to climate change.

**MISSION** BC Hydro is committed to providing integrated energy solutions to our customers in an environmentally and socially responsible manner.

**VISION** A competitive commercial Crown corporation which creates superior value for our customers and shareholder through the exceptional contribution of our people.

**GOAL** To be the leading sustainable energy company in North America.



## GOVERNANCE

We have a governance framework in place to provide the leadership for ongoing success.

Our Board of Directors is appointed by the Lieutenant-Governor in Council and is accountable to the Province of British Columbia for the performance, actions and risks of BC Hydro and its subsidiaries. The Board is also responsible for charting the corporation's strategic direction.

The Board strengthened our existing framework in January 2000 by updating a number of policies and procedures, including those addressing Codes of Conduct for directors and employees.

At the same time we expanded existing provisions to include explanations of processes for risk management and subsidiary accountability, and specific executive responsibilities for our Environmental Management System.

Additional sustainability efforts include the decision to form a steering committee of senior-level company officials to direct our Sustainability Working Group, itself comprised of key managers from across the company and the project leaders for each of the initiatives undertaken through the Sustainability Action Plan.

## ALIGNING ACTION TO STRATEGY

Incorporating sustainability into the core of BC Hydro's business activities is done through the Value Based Management (VBM) program.

VBM provides the basis for integrating management processes and focusing the entire organization on achieving business results. We use VBM to manage our business, including aligning operations to strategy.

VBM involves developing management tools, including Strategy Maps and Scorecards, that are used first to communicate strategy, and then to align performance management, resource allocation, initiatives, planning and decision-making.

Our Strategy Maps and Scorecards have been revised to integrate sustainability considerations into our management systems, ensuring balanced corporate-wide accountability on our three bottom lines. Finding ways to measure true critical success factors, such as intellectual capital and capacity to innovate, continues to be challenging.

As the champion for sustainability at BC Hydro, my challenge is to ensure we balance environmental, social and economic considerations in all that we do, and in the process become North America's leading sustainable energy company.

My mandate is to build on our existing strengths – abundant, clean hydropower, peak financial health, a strong environmental record and stakeholder relationships across the province – and to improve in areas where we want to be more sustainable.

The principal mechanism for achieving our goal is BC Hydro's new Sustainability Action Plan, which applies immediate focus and resources to six key areas: new technology initiatives, environmental measures, new products and services, social initiatives, planning and consultation, and employee initiatives.

Key plan elements include action to improve BC Hydro's ability to attract and retain highly skilled people to drive our company forward, and to generate sufficient revenue to both grow our company and satisfy legislated requirements to pay dividends to the Province of British Columbia.

The plan is being implemented over three years. Responsibility for accomplishing its objectives is vested at the executive level, through a steering committee of senior executive officers overseeing a working group of senior managers accountable for specific sustainability initiatives.

Sustainability is a journey, not a destination, and these newest measures are among many steps, large and small, that we continue to take in our quest to equitably balance the environmental, social and economic considerations of our operations.

I look forward to achieving our goals, and sharing our results with you in subsequent BC Hydro Triple Bottom Line Reports.

Sincerely,

Bruce Sampson
*Senior Vice President*
*Strategic Planning and Sustainability*

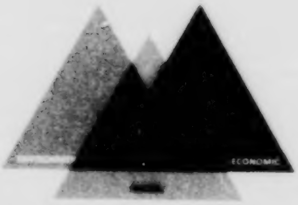
# SOCIAL

# BOTTOM LINE

Our social bottom line measures how well we consider the interests of people we affect, interact with and depend on in the course of our business.

Our employees are the foundation of our success, the drivers of our core business strategies and the basis of our confidence in BC Hydro's evolution towards sustainability. We are working to build a strong and capable organization.

A strong and capable organization also lends strength to the people outside our company, in the communities we serve. BC Hydro's respect and concern for the broader social environment in which we operate will earn us the public's trust and consent to continue managing the province's energy resources on their behalf. Our success is sustained, in part, by the positive business, cultural and personal relationships that ensue.



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# BUILDING A STRONG AND CAPABLE ORGANIZATION

Employee knowledge, commitment and innovation are crucial to our company's future, especially as we further incorporate sustainability into BC Hydro's core values and business strategies. Our goal is to foster high-performance teams of employees by sharing a common vision of excellence, investing in individual growth and development, and cultivating a work environment that encourages people to reach their full potential.

We have identified workforce initiatives as being crucial to building a sustainable future. Demographic trends and competition for the best people mean we must work harder to attract and retain the skilled and qualified employees who are and will be the backbone of our organization. As well, over the next decade we will experience significant turnover due to the retirement of an aging workforce, and at a time of unprecedented shortages of skilled labour across North America.

To meet these challenges, in 2001 we started work on several key initiatives to make BC Hydro an employer of choice. Programs directed at strategic workforce planning, competitive compensation, training and development, and succession planning have been developed to address the needs in areas expected to be hardest hit by attrition, turnover and competition for highly-skilled employees.

## SUSTAINABILITY ACTION PLAN INITIATIVE

### CORPORATE SOCIAL RESPONSIBILITY

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## WORKFORCE INITIATIVES

We compete for skilled employees in an open market and have developed a compensation strategy to help ensure we are competitive with current and future external labour-market realities.

We will offer a flexible, competitive base pay and benefits package plus incentives for exceptional individual and company performance. By aligning our actions to strategy we will focus on results.

One of our goals this past year was to identify: employment areas expected to be hardest hit by attrition and staff turnover; the resources and skills we need to remain competitive; and how to acquire and retain people to fill key roles.

To achieve this goal we have developed a consistent methodology for workforce planning and risk measurement and are implementing it in all strategic business units for fiscal 2002.

We are also working to ensure continuity of in-house skills in critical, specialized positions by developing "bench strength" among existing employees. The process involves identifying and developing pools of candidates to draw from as needs emerge. Our goals are to match current skills within the organization to assume leadership roles.

SUSTAINABILITY ACTION PLAN INITIATIVE

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## CORPORATE SOCIAL RESPONSIBILITY

A three-year program was launched this year to supply one of the crucial pieces we need to build our future as a sustainable energy company: knowledge of how we impact the social bottom line.

We are developing a measurement and decision-making structure to define corporate social responsibility and integrate it across our business structures.

The program aims to unearth the social aspects of our business that contribute to shareholder value, and to change the way we conduct business to accrue that value. Results are expected to provide the foundation for defining, driving and delivering future corporate social responsibility activities across our business units.

The program's first year will define the company's social responsibility principles and will develop strategies for their incorporation into our business. Years two and three will focus on implementing the resulting plans and monitoring our performance.

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## EMPLOYEE INVOLVEMENT IN SUSTAINABILITY

We are inviting our employees to become the core of our focus on sustainability.

Recognizing that employee involvement is a precondition for BC Hydro to become a sustainable energy company, we have initiated a three-year program to engage people in broad discussions of our future and how to make it successful.

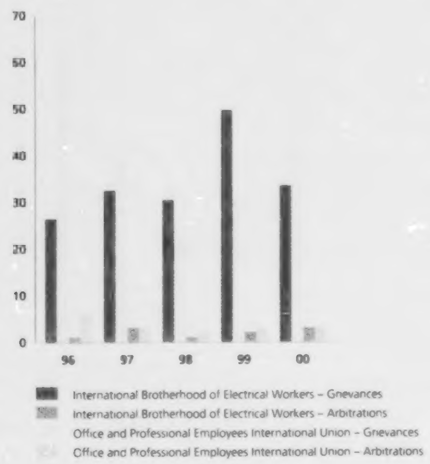
The program will focus on strengthening our internal capabilities by fostering greater employee awareness of sustainability, how it affects us and how mutual efforts can be aligned to a common goal.

The program is aimed directly at linking sustainability to efforts to build a strong and capable organization. Objectives are to build understanding and alignment on common goals, and to engage people in designing sustainable solutions through innovation, ideas and partnerships.

NEW WAYS OF THINKING AND OPERATING ARE AMONG WAYS WE ARE WORKING TO BUILD A STRONG AND CAPABLE ORGANIZATION.

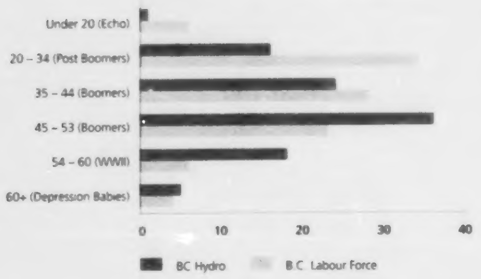
GRIEVANCE/ARBITRATION TRENDS AMONG UNIONIZED WORKFORCE

NUMBER



AGE DISTRIBUTION – 2000

PER CENT



Data Source: PAHR May 2000, 1999 Strategic Projections Inc.

## RELATIONSHIPS WITH UNIONIZED WORKFORCE

BC Hydro is trying to foster more collaborative relationships by promoting open dialogue between union and management, and by keeping unions informed of all issues at BC Hydro.

Many unionized employees are frustrated by wage guidelines imposed by the provincial government for the past seven years, feeling they restrict free collective bargaining with BC Hydro. Employee morale has been impacted by these restrictions. We have attempted to find creative ways to recognize and celebrate employee performance.

For example, last year we reached agreement on gain sharing with our unions. The agreement provided cash awards based on the company's profit performance, customer satisfaction ratings and completion of personal development plans. We also reached agreement on market adjustments of some job classifications at Westech to make compensation more competitive within the marketplace.

Challenges include negotiating similar adjustments to other job classifications, and working with unions to ensure capable and competent workers are trained to replace skills lost to retirement in coming years.

## DIVERSITY

Increasing the diversity of our workforce to reflect the communities we serve, and to encourage new ways of thinking and operating, are among ways we are working to build a strong and capable organization.

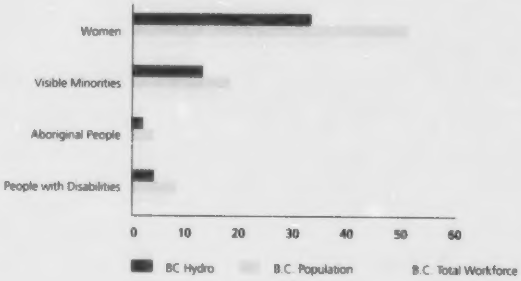
Over the past year we continued to develop our ability to provide equitable service to customers, and to maintain and establish relationships in communities. We partnered with compliance agencies to develop programs and business forums about multiculturalism. We also created a new outreach recruitment strategy to help our company attract employment candidates from among women, Aboriginals, visible minorities and people with disabilities.

Last year we implemented a new system to provide non-English-speaking customers with service in their own language. We also began to develop a policy to help us meet our legal requirements for the equitable treatment of all employees under the B.C. Human Rights Code.

Other steps included diversifying our Power Smart Youth Energy Team to include more Aboriginal youth, and multilingual youth from B.C.'s Asian and Indo-Canadian communities.

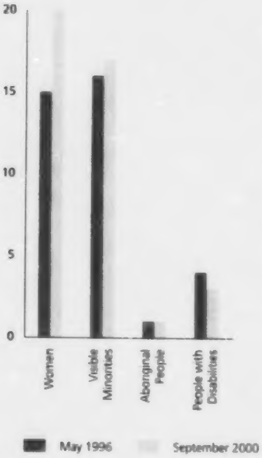
DIVERSITY OF WORKFORCE - 2000

PER CENT



REPRESENTATION IN SENIOR AND UPPER LEVEL POSITIONS

PER CENT



## EQUITY

Improving workplace conditions for women is important to BC Hydro. Women make up about one-third of our workforce, and over half are employed in clerical positions. Steps taken to help us recruit and retain women for all positions include access to quality childcare at our Edmonds facility, comfort rooms for new mothers at our Dunsmuir and Edmonds offices, and consulting services for women returning to work after childbirth.

The proportion of women at the senior and upper levels of our company has grown from 15 to 20 per cent in recent years.

Our equity actions also include BC Hydro's Respectful Workplace program, which recognizes the social, ethical and legal responsibilities for providing a work environment where all individuals are treated with dignity and respect. The program provides a respectful workplace policy, as well as seminars, workshops, counseling and a formal harassment complaint investigation process.

THE PRESIDENT'S AWARDS RECOGNIZE SIGNIFICANT EMPLOYEE ACHIEVEMENTS IN LEADERSHIP, CUSTOMER SERVICE, TEAMWORK AND SUPERIOR RESULTS

## EMPLOYEE HEALTH AND WELLNESS

Strong and capable organizations are founded on the physical, emotional and social well-being of employees. BC Hydro supports and encourages employee well-being through a series of Health Services programs tailored to specific areas of interest or need. Programs are designed to encourage positive lifestyles and to protect employee health and safety on the job.

Five main programs support employee well-being:

- **EMPLOYEE AND FAMILY ASSISTANCE** provides confidential, professional counseling services to employees and their family members to help them deal with personal problems;
- **RESPECTFUL WORKPLACE** ensures employees and work groups enjoy a harassment-free workplace, where all individuals are treated with dignity and respect;
- **CARE MANAGEMENT** works with the employee and the employee's physician to ensure employees with medical problems are receiving a high standard of care;
- **RETURN TO WORK** develops a detailed return-to-work plan for injured employees, helping them make a less stressful transition back to work; and
- **THE LIFESTYLE PROGRAM** encourages employees to be healthy and well-balanced by adopting positive behaviours and a holistic approach to health.

Approximately 38 per cent of our employees are involved in the Lifestyle incentive program, well above industry averages. We aim to increase participation to more than 40 per cent.

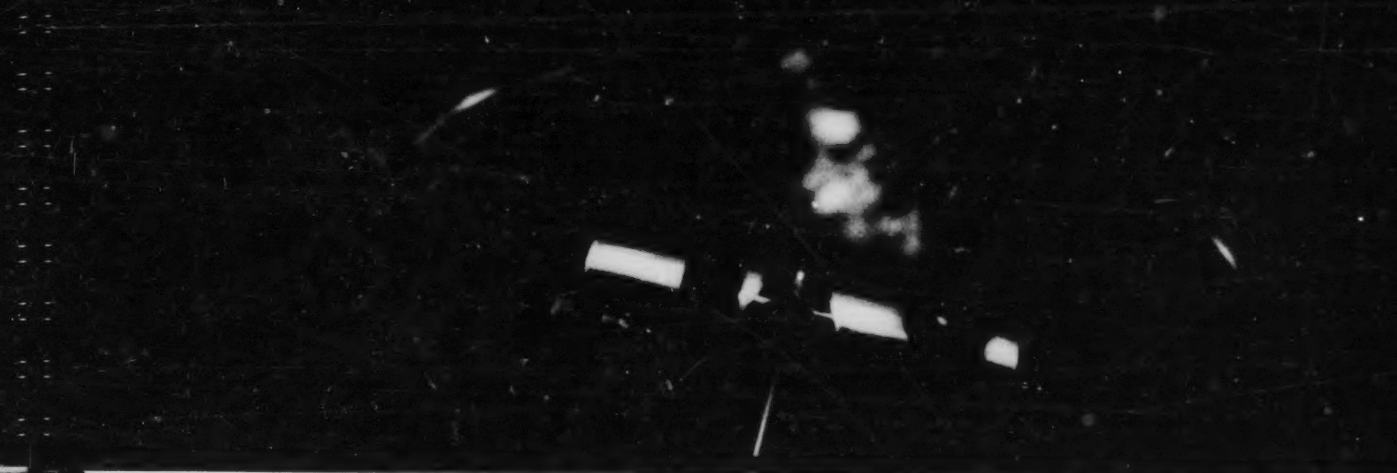
The Lifestyle program provides products and services such as health education workshops about heart disease, stress awareness, nutrition and back care, as well as one-on-one fitness and wellness counseling, health risk appraisals, and information and screenings to help manage cholesterol, diabetes and blood pressure.

About 175 workshops were delivered last year to more than 2000 employees, and over 84 per cent said they were satisfied with the content. Benefits derived from program involvement include a lower rate of sick days and Workers' Compensation Board claims for participants, and an estimated overall four-to-one rate of return on expenditures.

## RECOGNITION PROGRAMS

In 2000 we launched the President's Awards to recognize significant employee achievements in leadership, customer service, teamwork and superior results. Recipients must also contribute to our business objectives, support company values and promote unity within the company.

Other formal reward and recognition programs in place in our strategic business units include Power Supply's annual award for leadership, and top performers singled out each year in our Marketing and Sales, Transmission and Distribution and Human Resources divisions, and in our Westech subsidiary. We also provide company-wide programs honouring individuals for length of service, safety and lifestyle.



## EMPLOYEE SAFETY

Concern for safety is paramount throughout BC Hydro. Our policies direct an integrated safety management system, with functional programs and annual safety planning conducted in each business unit.

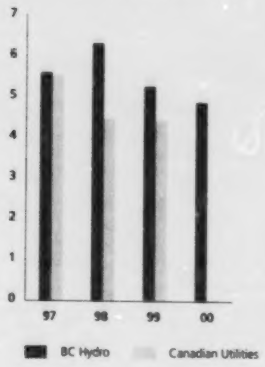
Our drive to improve safety performance, policies and practices led us to conduct a safety management system evaluation last year. The project aimed to improve occupational safety and health performance, and broaden employee awareness of safety concerns. It found our safety management system is comprehensive and thorough, risks are well-managed, and the structure of our safety programs is sound. Areas of concern identified in the evaluation include:

- instances when power line technicians work alone;
- absence of a clear system of dealing with workers who have demonstrated repeated and blatant patterns of unsafe behaviour; and
- a shortage of experienced workers, which will grow with retirements of current staff.

Recommendations to address the above concerns include:

- establishing an annual improvement target to link pay to safety requirements and improvements;
- providing figures to allow business units to compare safety performance;
- reporting less serious incidents to reveal developing patterns;
- reviewing the structure of safety committees; and
- showing visible safety commitments throughout the organization.

ALL INJURY FREQUENCY RATE



Our commitment to continuous improvement was also reinforced last year by introducing an annual improvement plan to reduce injury incidents.

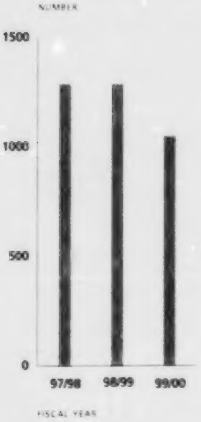
Other safety management system advances in 2000 include developing new work protection practices for generating facilities, and a comprehensive investigation standard to better analyze both near-misses and injury incidents. We also made available a selection of standardized reports for managers and safety committees, and website access to safety reports.

# SUPPORT

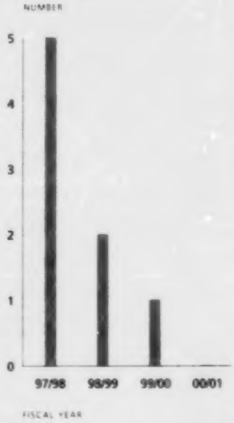
## COMMUNITY

We build public expectations into our business decisions. BC Hydro representatives in each region of the province help us understand local concerns and attitudes about energy, our operations and obligations, particularly with respect to safety, education and resource use issues. By encouraging effective dialogue and working together, we ensure BC Hydro continues to contribute to the economic, environmental and social well-being of the communities we serve.

**PUBLIC INCIDENTS INVOLVING A BC HYDRO PLANT (EXCLUDING MOTOR VEHICLE ACCIDENTS)**



**PUBLIC FATALITIES**



## PUBLIC SAFETY

BC Hydro conducts its operations to minimize the chance of injury to employees, contractors and the public.

### GENERATING FACILITIES

Last year we completed a comprehensive standard to ensure public safety at BC Hydro generating facilities. The standard requires a public safety management plan to identify hazards at each of our operations, as well as control measures.

In conjunction with the standard, we completed a review of public safety practices at our generating facilities, and a benchmarking study comparing our safety management system to those of similar organizations. While finding that our system is generally consistent with, or more advanced than, others in place in North America, the study noted areas where corrective actions are needed and recommended several steps that could be taken to improve our system. We are now developing templates for individual safety management plans for individual facilities.

## DAMS

Since 1982 BC Hydro has operated a formal dam safety program and ongoing process to review, assess and document the safety status of our dams, based on a comprehensive dam safety management system. The program is ongoing, evolving and respected internationally. New developments include performance-based surveillance for early detection of aging or deterioration in a dam, incorporating the latest technology for automated instruments, remote video cameras, data communications and alarm systems.

In 2000 BC Hydro initiated seismic safety investigations and upgrading at dams in the Lower Mainland and on Vancouver Island, including Coquitlam and Elsie dams.

The work at Elsie dam, near Port Alberni on Vancouver Island, followed identification of a loose layer at the upper portion of the earthfill dam during a scheduled review of the dam in 1999. The engineering analysis determined risk of dam failure or damage in a major earthquake. Reservoir levels are being maintained below the loose layer to ensure safety of the dam while improvements are designed and implemented.

An improved spillway channel was constructed during 2000 to maintain the reservoir below the safe level. The loose layer will be repaired in 2001 and all dam improvements completed in late 2002, at which time the dam will return to full service.

## POWER LINES

Public concern remains high about potential effects from exposure to electric and magnetic fields (EMFs) around high-voltage transmission lines. Findings of medical health studies are varied and sometimes inconclusive. Last year we responded to 340 calls from customers requesting information about EMFs. Other actions to promote knowledge of EMFs include:

- supporting EMF research by independent university scientists, and monitoring and evaluating scientific evidence on the effects of EMFs;
- encouraging and participating in utility, scientific and technical forums to discuss EMFs and related issues;
- continuing to support the development of EMF standards that are scientifically based; and
- providing loans of EMF measurement devices to customers wishing to measure EMFs in their environment.

WE PLAN FOR RESPONSE AND RECOVERY FROM DISASTROUS EVENTS IN ORDER TO IMPROVE PUBLIC SAFETY

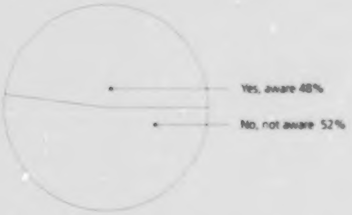
## PUBLIC ELECTRICAL SAFETY TRAINING PROGRAMS

BC Hydro is an industry leader in electrical safety programming. We develop and deliver programs tailored to specific audiences ranging from school children to emergency response personnel, with each program designed to raise awareness of the properties and risks of electricity. We are regularly approached by other utilities interested in purchasing these programs for their audiences.

Current programs include:

- Construction Industry – for building trades people who work in proximity to underground or overhead power lines;
- First Responders – for police, ambulance and fire personnel;
- Residential/Recreational – addressing electrical safety concerns relating to do-it-yourself tree-trimmers and outdoors enthusiasts; and
- Tomorrow's Public, and Playing It Safe – designed for school-age children.

UNAIDED AWARENESS OF ELECTRICAL SAFETY AMONG CRITICAL TARGET GROUP MALES 18-35 YEARS OF AGE



Data Source: McIntyre & Mustel Research

A training system was developed in conjunction with the Electricity Industry Training Institute in 2000 to ensure consistency of delivery of these programs throughout the Lower Mainland and on Vancouver Island. We have also increased newspaper, TV and radio advertising promoting safety around electricity, especially towards the "higher risk" target audience of males aged 18 to 35 years.

## DISASTER PREPAREDNESS

BC Hydro continually reviews the security and reliability of our electrical system. A number of investigations and upgrades were undertaken in 2000, particularly for earthquake impacts. Work included reinforcing foundations for several transmission towers along the Fraser River in Richmond and Delta, and anchoring equipment at numerous substations throughout the province. We also reinforced the towers supporting two transmission lines to Vancouver Island to better withstand high snow loads on steep terrain, and upgraded the earthquake resistance of a number of buildings at Ingledow, Dunsmuir, Cheekye and Murrin No. 1 substations.

We plan for response and recovery from disastrous events in order to improve public safety and more quickly restore service following damage to our system. Two exercises were undertaken in 2000 to test procedures for responses to disasters, and to train staff in appropriate actions. The first was the simulated release of excessively high flows from Seven Mile Dam, and involved interactions among BC Hydro, the community and government agencies in the Columbia River Valley. The second involved simulated response and recovery actions resulting from a major ice storm affecting the western end of the Fraser Valley.

We also developed the Cheakamus River Valley Flood Communications Plan in 2000 in consultation with area residents and emergency response professionals. The plan provides for warning in the event of flooding downstream of the Daisy Lake Dam, located north of Squamish and Brackendale. The plan's three-step alert system to notify residents was tested in an exercise late last year.

Two seminars were held to train staff to evaluate safety in buildings immediately following an earthquake. The event drew about 50 BC Hydro staff and 25 people from other organizations.

micro-hydro

## INVESTING IN OUR COMMUNITIES

Our reputation as a good neighbour is built at the community level. BC Hydro's Corporate Outreach programs coordinate our community investment and partnership activities, including public education, corporate donations, scholarships, support for retired employees and HYDRECS, our employee community services fund. Outreach programs invest in B.C. communities and the diversity of our province, and contribute to our strategic priorities.

### PUBLIC EDUCATION

Involvement in Education provides resources and programs for B.C. classrooms. We encourage broader knowledge of energy, its uses and impacts, through educational resources provided to support school curricula. Material we prepare is promoted through our website and at teachers' conferences. A new education module was developed last year for delivery in 2001. Designed for students in grades four to seven, "Powering our Future: Green Energy Options" provides a balanced look at alternatives such as wind, fuel cells, woodwaste, solar and small hydro. BC Hydro Youth Team members delivered 310 presentations to grade four students throughout the province in 2000.

Also, BC Hydro helped to fund the development of the "Up the Creek: The Salmon Survival Game" produced by the World Fisheries Trust, a non-governmental organization based in Victoria, B.C., and contributed nearly $10,000 to purchase 200 copies of the game last year for distribution throughout B.C., including one each to over 100 First Nations schools in B.C. via the First Nations Schools Association. The game promotes stewardship of salmon resources by bringing crucial information into the classroom.

Our education involvements continue outside schools. This year we are working with Science World to develop a long-term exhibition on sustainability, called "Our World." Scheduled to open in June 2001 and remain for a minimum of five years, the exhibit will feature interactive displays allowing children to experience how power is generated from wind, small hydro, thermal and solar sources.

BC Hydro also renewed the partnership established last year with Knowledge Network, B.C.'s public educational broadcaster. The new two-year agreement covers sponsorship of "Planet Education," a thirteen-part television series profiling innovation and excellence in business, research and careers throughout B.C. Knowledge Network is a division of the Open Learning Agency.

THIS YEAR WE ARE WORKING WITH SCIENCE WORLD TO DEVELOP A LONG-TERM EXHIBITION ON SUSTAINABILITY, CALLED "OUR WORLD."

## CORPORATE DONATIONS

We provide grants to non-profit organizations in four areas: Aboriginal, Arts and Culture, Education, and Environment. Last year we provided $3 million to over 500 non-profit organizations in B.C. who met our funding criteria for initiatives of lasting social value.

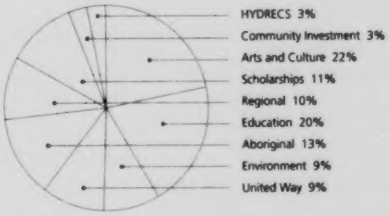
Contributions were spread throughout the province, to groups in every region of B.C., in amounts ranging from less than $100 up to $150,000.

Donations to Aboriginal organizations included $40,000 to Dreamworks, a new program developed by the Lower Mainland chapter of Big Sisters of B.C. to provide First Nations women with the opportunity to job-shadow in a profession of their choice. Among other projects, we donated $20,000 towards the development of "A Coast Sto:lo/Coast Salish Historical Atlas" and the Ktunaxa Independent School Society's natural resources technology program, and supported the Sto:lo Nation's construction of an Ethnobotanical Garden in Chilliwack containing plant material with cultural and healing significance to First Nations.

Funding for environment projects included support for Greening Schoolgrounds, a program that helps parents, teachers and children increase plant life in and around schoolyards.

We provided an Arts and Culture donation of $19,300 to the Prince George Symphony Orchestra to stage a performance of Handel's Water Music in Fort St. John, Hudson's Hope and Chetwynd, in tandem with visits by musicians to local elementary and secondary schools.

CORPORATE AND REGIONAL DONATIONS



In 2000/2001 we provided $3 million to over 500 non-profit organizations in B.C.

BC Hydro has committed $60,000 over three years to the Courtenay and District Museum and Paleontology Centre on Vancouver Island. The donation will support school programs, fossil tours and field trips that focus on the prehistoric environment of the Puntledge River and its importance to BC Hydro and the region.

Education donations included $50,000 to the Seventh Generation Club, a continuing partnership of BC Hydro, Health Canada, Indian and Northern Affairs Canada, the First Nations of B.C. and the former Vancouver Grizzlies professional basketball team. The club is targeted at First Nations youth and reinforces the philosophy that individual choices affect seven generations. It combines sports and role models to inspire and motivate youth attending First Nations schools throughout B.C. It promotes regular school attendance and healthful lifestyle choices, and provides motivational tools to set and reach goals. BC Hydro also donated, through the Science Council of B.C., 75 per cent of our used computers to schools.

### SCHOLARSHIPS

We provided scholarships to 178 B.C. students this year, up from last year's total of 127. Scholarships recognize students who excel in academics and are leaders in their schools and communities. We award general studies, Aboriginal and Power Smart scholarships, the President's Scholarship for children of BC Hydro employees, and L'Ecole Polytechnique memorial awards to female students entering engineering. This year's scholarship recipients included eighteen Aboriginal students pursuing post-secondary studies – almost double the number of recipients compared to last year.

### EMPLOYEE-DIRECTED ACTIVITIES

HYDRECS, the BC Hydro Employees Community Services Fund, raised a record $865,624 in 2001. As the largest employee fund in B.C., HYDRECS has supported approximately 1000 charities across B.C. since 1990. Over 40 per cent of our employees participate in giving; our target for 2002 is 45 per cent participation.

Hydro Employees Multicultural Society (HEMS), the only such employee-driven multicultural organization within any company in B.C., won the first Annual Multiculturalism Award from the provincial government in 2000 and continued last year with significant work internally and in the various multicultural communities.

Power Pioneers, the association of our retired employees, supports BC Hydro and community activities. Last year the association began its second decade by partnering with the B.C. Crime Prevention Association, the Royal Canadian Mounted Police and municipal police forces to present the Wise Owl crime prevention program for seniors. Wise Owls have made forty presentations to approximately 900 seniors throughout the province, offering information about fraud prevention and other crimes targeted at senior citizens.

## YOUTH EMPLOYMENT INITIATIVE

Launched in 1998, BC Hydro's Power Smart Youth Team program supports our drive to build customer support and loyalty by promoting products and services at the community level. The program also provides youth with valuable employment experience. Last year we hired 175 Power Smart Youth Team members who worked on various projects and initiatives across the province. Among that total were 40 youth who participated in local improvement projects, including trail-building on rights-of-way.

## POWER SMART CENTRES

Our Power Smart Centres in five locations – Abbotsford, Dunsmuir head office, Courtenay, Cranbrook and Kamloops – were repositioned in 2000 as "Learning Centres" in order to strengthen our community presence by providing beneficial energy-related information and solutions. The centres offer the advantage of being a touch point in the community, providing a face-to-face experience for customers.

Our strategy for the centres includes demonstrating our community involvement, and positioning them as a learning resource. First opened in 1999 as information and customer service outlets, they now focus on promoting awareness of the Power Smart brand, providing customer education about energy topics and being a source of community involvement and awareness.

## PUBLIC RECREATION FACILITIES

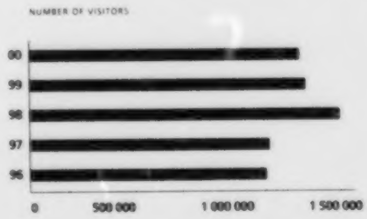
In 2000 approximately 1.2 million people visited our public recreation areas on reservoirs and rivers throughout B.C. We also facilitate recreation along our rights-of-way and at other locations.

A key project to improve local recreation opportunities was initiated in the Comox Valley in 2000 and involved recruiting displaced forest industry workers to construct hiking trails on BC Hydro property alongside the Puntledge River. The trails link to an existing greenway at our property boundary and are accessible to hikers, cyclists and people with disabilities.

Other significant projects in 2000 included campground and boat launch improvements adjacent to our Seven Mile facility in the B.C. Interior, construction of a viewpoint at Lillooet and a redesign of our Jones Lake campground.

Our project to replace the 1912 Stave Falls Generating Station with a more efficient, modern station won recognition on two fronts in 2000: as a finalist in an international competition for projects demonstrating technical, environmental and social success; and as the second-place finisher for a public participation award. Following startup of the new station we began converting the former generating station into a BC Hydro visitor centre. The centre will promote understanding of electricity generation and the history of electrical development, and serve as a tourism destination point.

RECREATIONAL SITE VISITORS



We also created a new walking trail by converting an access road at McLellan substation on the eastern boundary of Surrey. The trail follows McLellan Creek and connects to HiKnoll Park in Surrey and Brydon Lagoon in the City of Langley. It is proposed to form a part of the Cloverdale Greenway, in partnership with the City of Surrey.

# FORGE
## PARTNERSHIPS

Relationships are developed through the many encounters that occur every day between BC Hydro staff and our stakeholders. We also operate a Community Relations program and department dedicated to establishing dialogue between the public and BC Hydro. Working in partnership with others, and forging beneficial associations with people and groups, strengthens BC Hydro's ability to share our vision and desire for a sustainable future, based on the principles of openness and respect.

### WORKING WITH SUSTAINABILITY STAKEHOLDERS

We build relationships and maintain dialogue with environmental and other non-governmental organizations at the forefront of change to public attitudes about policies and actions that directly influence our triple bottom line.

Significant activities involving BC Hydro and non-governmental groups in 2000 included a Memorandum of Understanding with the Pembina Institute for Appropriate Development to guide our working relationship on sustainability and corporate performance issues. We continued to support distribution of the Institute's Climate Change Awareness and Action multimedia education kit for high school students in science, social studies, geography and environmental studies classes.

BC Hydro continues to work closely with government agencies such as the newly appointed Ministery of Water, Land and Air Protection (formerly the B.C. Ministry of Environment, Lands and Parks), and the federal Department of Fisheries and Oceans (DFO).

### INTERNATIONAL PARTNERSHIPS

Expertise from BC Hydro is helping Romania's state-run electricity utility contend with environmental and watershed management issues as the country copes with market competition, restructuring and opportunities for new business.

Under the arrangement, BC Hydro specialists are helping Romania's Hydroelectrica utility clean up environmental problems to improve operating efficiencies at hydroelectricity plants, therefore reducing pressure on thermal generation resources and helping the country meet its GHG emission reductions targets.

The partnership is funded by the Canadian International Development Agency (CIDA) and managed by our subsidiary, BC Hydro International Ltd., in cooperation with the GLOBE Foundation, the key global organization for business and the environment.

Similarly, BC Hydro International is providing technical and management support for institutions in Malaysia and Brazil that are mandated to develop nation-wide demand-side management and energy conservation programs modelled after BC Hydro's successful Power Smart program. Our support provides significant economic and environmental benefits for these countries.

## RELATIONSHIPS WITH FIRST NATIONS

Virtually all our facilities are within First Nations' territories, and the impacts of our system on their communities have been extensive. Our efforts to build mutually beneficial relationships with First Nations focus on five strategic areas: business development, communication, cross-cultural training, negotiation and consultation, and policy and government relations.

BC Hydro launched phase two of the Aboriginal Business Development Partnership program last year, providing 26 Aboriginal businesses with funding to help with startup and expansion initiatives. Interest in the program increased by over 100 per cent between 1999 and 2000, receiving 40 applications in 1999 and 107 last year.

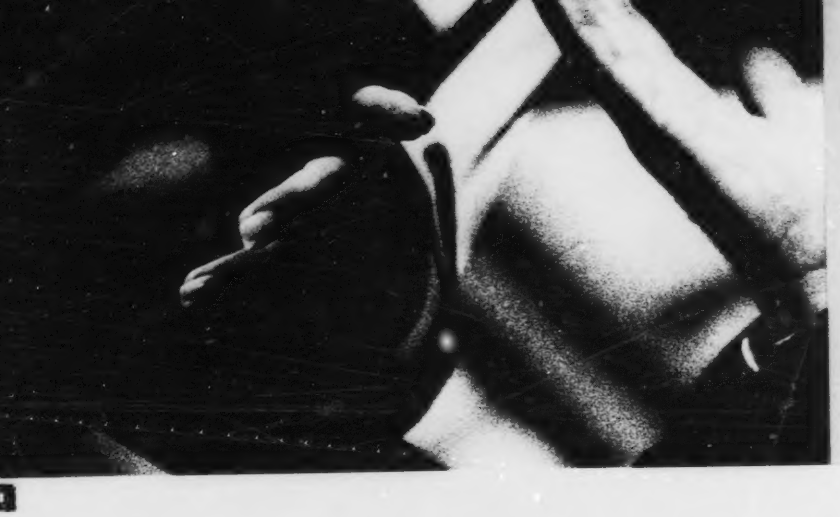
## FIRST NATIONS PARTNERSHIPS

We reached agreement in 2000 with the Canadian Columbia River Inter-tribal Fisheries Commission to fund a two-year pilot project. A full time hydro biologist will be hired to provide technical expertise and coordination to the Columbia Basin First Nations.

The project will help First Nations engage Hydro in the following:

- participation in Water Use Planning (WUP) and the associated processes;
- protection and enhancement of fish and fish habitat; and
- restoration and protection of Aboriginal fisheries within the basin that are potentially impacted by BC Hydro facilities.

The agreement will help First Nations participate in a dialogue about fisheries processes, and ensure First Nations' perspectives are represented in them.



**BC Hydro actively seeks to establish relationships with external parties that benefit both parties. These parties include customers, suppliers, contractors, business partners, governments, Aboriginal peoples, the unions that represent our employees, the general public and the media. We are committed to open, credible and timely communications with these parties. We will seek out and consider their views, needs and values in our initiatives and projects, and we will resolve issues promptly.**

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## COMMUNITY RELATIONS

We maintain a network of staff that interacts on a daily basis with our stakeholders throughout the province. BC Hydro's Community Relations personnel work to develop dialogue with individual citizens, community organizations and local governments, provide information and support on issues, and respond to concerns.

Much of our Community Relations activities are related to public consultation on corporate and regional capital projects, initiatives, operations and issues. A key focus at this time is the Water Use Planning processes to review water licenses at all our hydroelectric facilities, which are at various stages of development throughout the province and which involve a wide range of public activities. Last year we also devoted significant attention and energy to public dialogue about the proposed Georgia Strait Gas Pipeline Crossing from Sumas, Washington to southern Vancouver Island, and to initiating the Bridge Coastal Restoration Program (see Environmental section), which incorporates a high degree of public involvement in decision-making.

Topics of concern to communities focus on the impacts our operations have on local quality of life, including reservoir levels and dust storms, recreation opportunities, access to rights-of-way, fisheries, and customer service issues such as power reliability and outages. For example, one of the most pressing issues our Community Relations staff dealt with in the past year concerned who was responsible for maintaining a rural road used by a local population of 250 people.

We work with communities to resolve concerns in order to improve quality of life. For example, BC Hydro maintains a range of community-based activities in Port Moody. Highlights include our popular tours of Burrard Generating Station, which have provided hands-on learning about electricity generation for more than 3000 students since their inception in 1999. Last year we also contributed to the Burrard Inlet Marine Enhancement Society to expand their fish hatchery, and were the lead sponsor for the Port Moody Festival of the Arts for the fourth successive year.

Community Relations staff work hard to encourage public involvement in the larger issues surrounding B.C.'s energy future, such as resource questions, green energy options and public consultation. Information about these and related issues and efforts is promoted wherever possible, and provided through a variety of printed and electronic means.

## PUBLIC CONSULTATION ACTIVITIES

A number of public consultation processes are underway or ongoing at BC Hydro to incorporate stakeholder comment into power initiatives, and to achieve consensus on resource-use issues affecting B.C.'s energy future. Examples include Water Use Planning (WUP) programs underway throughout B.C., the Port Alberni gas-fired generation project, Georgia Straight crossing project, dialogue on our 2002 Electricity Plan, new infrastructure developments such as substations and cable replacement projects (see Hill Avenue, Environmental section), and our Dam Safety Program.

TOPICS OF CONCERN TO COMMUNITIES FOCUS ON THE IMPACTS OUR OPERATIONS HAVE ON LOCAL QUALITY OF LIFE

## ENCOURAGING DIALOGUE

We invited several groups to comment on green energy criteria for small hydro projects; joined a coalition of groups and agencies seeking to accelerate development of Canada's renewable energy industry; and worked in partnership with groups and governments to undertake a community energy planning study in Nemiah Valley, a community isolated from our provincial energy grid.

Consultations have also figured prominently in our GHG-management actions. Our strategy for action on climate change emphasizes dialogue with governments, industry groups and stakeholder organizations. Last year we were involved in discussions of Canada's actions under the Kyoto agreement to reduce GHG emissions below 1990 levels by 2012; worked with industry associations to develop climate change policy proposals for national and international consideration; participated in multi-stakeholder examinations of emission reduction trading; and advised the B.C. government about our positions on climate change policy.

We extended our consultation efforts last year to include soliciting feedback on our Triple Bottom Line Report for 1999. We invited 41 people representing various groups, organizations and agencies to evaluate and comment on the aim, direction and content of the report, and to offer suggestions for its improvement. Among their responses, participants encouraged us to articulate more clearly our sustainability objectives, be more candid about problem areas, set definite targets and show trends.

## TBL DIALOGUE

BC Hydro initiated focus group research last year to evaluate the awareness and perception of TBL reporting among our stakeholder groups, and for feedback on how we can improve our TBL reporting. Research consisted of seven advisory groups totalling more than forty representatives of non-governmental organizations, industry, government, education specialists, opinion leaders and BC Hydro staff.

Panel members suggested several ways BC Hydro's TBL reporting could improve:

- clearly state TBL and sustainability objectives up front;
- be more candid;
- talk about the good and bad news that drives our business;
- provide hard numerical targets, and show what we plan to do to get back on track if we do not meet our targets;
- make TBL goals part of our internal performance measures;
- keep pushing the envelope, don't stand pat; and
- involve third-party verification.

Our responses to several suggestions – being more candid, for example – are being incorporated into this year's report. Other changes, such as targets and measures and third-party verification, will continue to evolve over the next few years.

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## WATER USE PLANS

Water Use Plans (WUPs) to involve stakeholders in clarifying how rights to provincial water resources should be balanced between energy production and competing social and environmental values associated with the resources. In practical terms, WUPs will define operating conditions and constraints at our facilities throughout B.C.

WUPs are crafted using a consultative model developed with government, First Nations and the public to provide a forum for new ideas for water management, and for consideration by local community representatives, First Nations, governments, environmental groups, industry and BC Hydro.

Designed to recognize and consider many water-use interests and objectives, WUPs for all our facilities are expected to be completed and submitted to the provincial Comptroller of Water Rights for approval by the end of 2003. Consultations began in 1999 and are completed for our Alouette and Stave installations. By the end of 2001 processes are expected to be completed for seven other facilities, including Ash, Bridge River, Campbell River, Cheakamus, Coquitlam/Buntzen, Jordan River and Shuswap.

Discussions seek to balance water uses for power production, fish habitat, wildlife, recreation, community needs and other interests. There is a wide spectrum of values placed on these uses, as reflected by the variety of views and the number of people coming forward to be involved in WUPs processes. Bringing these people and interests together is a challenge, and each group works hard to build consensus on the best balance of priorities in a WUP.

### STEPS TO DEVELOP WATER USE PLANS

- › 1. Initiating WUP
- › 2. Scoping
- › 3. Planning Consultations
- › 4. Measuring Objectives & Performance
- › 5. Gathering Data
- › 6. Creating Alternatives
- › 7. Assessing Tradeoffs
- › 8. Recommending Documentation
- › 9. Drafting and Submitting WUP
- › 10. Reviewing WUP by Provincial Government
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## GEORGIA STRAIT CROSSING

An extensive communications and consultation program has been conducted in connection with our proposed Georgia Strait Crossing project to build a natural gas pipeline from Washington State to Vancouver Island. This process followed protests that dialogue was excluded from the preliminary stages of the project.

The pipeline would allow us to deliver reliable, inexpensive, and socially and environmentally responsible power to our customers, and is part of our strategy to use incremental additions of natural gas-fired capacity as an interim step until more sustainable power sources are available to help us meet demand.

Public involvement in the discussions of the crossing route was invited at key stages of the pre-application, beginning with the project's introduction in late 1999, and continuing through processes for corridor selection, route identification and refinement, and ongoing consultation and documentation, continuing to late 2000.

Comprehensive efforts were made to inform and involve people in the discussions. In total, we held 21 community events – 16 open houses and five drop-in information sessions – and responded to numerous public and media requests for information. However, as with many large energy projects, some stakeholders remain dissatisfied with the consultation process.

## WUP PROJECT UPDATES

Each WUP process covers nine steps from initiation to submitting a draft plan, followed by four stages of review and monitoring. Status of processes underway is as follows:

- **ASH** – completing steps two through four by confirming participants, setting objectives and developing preliminary performance measures.
- **BRIDGE RIVER** – at steps five and six; 15 studies are completed and the committee is creating operating alternatives for the facility, following completion of data gathering pertaining to the impact of water flows and reservoir operations on plan objectives.
- **CAMPBELL RIVER** – at steps four, five and six; environmental studies continue and the committee is establishing performance measures; fine-tuning of alternative operating regimes for the facilities will take place over the fall of 2001.
- **CHEAKAMUS** – at step four; the committee has confirmed issues surrounding operation of the facility and expressed them in terms of specific water use objectives, and now is working to establish performance measures prior to considering alternatives; 13 studies are completed or underway.
- **COQUITLAM/BUNTZEN** – at steps five and six; data gathering on the Coquitlam River is in progress, with 12 studies completed or underway, and the committee is beginning to create operating alternatives for evaluation.
- **JORDAN RIVER** – at steps five and six; two studies are completed, and the committee has confirmed operating issues and developed initial operating alternatives.
- **MICA/REVELSTOKE/KEENLEYSIDE** – same status as Ash.
- **PEACE** – same status as Ash.
- **SHUSWAP** – at steps four, five and six; five studies are underway or completed and data gathering is continuing to allow performance measures to be refined and to examine preliminary operating alternatives.
- **WAHLEACH** – same status as Ash.

## SUSTAINABILITY ACTION PLAN INITIATIVE

[illegible]

## WATER USE PLANS

Water Use Plans (WUPs) to involve stakeholders in clarifying how rights to provincial water resources should be balanced between energy production and competing social and environmental values associated with the resources. In practical terms, WUPs will define operating conditions and constraints at our facilities throughout B.C.

WUPs are crafted using a consultative model developed with government, First Nations and the public to provide a forum for new ideas for water management, and for consideration by local community representatives, First Nations, governments, environmental groups, industry and BC Hydro.

Designed to recognize and consider many water-use interests and objectives, WUPs for all our facilities are expected to be completed and submitted to the provincial Comptroller of Water Rights for approval by the end of 2003. Consultations began in 1999 and are completed for our Alouette and Stave installations. By the end of 2001 processes are expected to be completed for seven other facilities, including Ash, Bridge River, Campbell River, Cheakamus, Coquitlam/Buntzen, Jordan River and Shuswap.

Discussions seek to balance water uses for power production, fish habitat, wildlife, recreation, community needs and other interests. There is a wide spectrum of values placed on these uses, as reflected by the variety of views and the number of people coming forward to be involved in WUPs processes. Bringing these people and interests together is a challenge, and each group works hard to build consensus on the best balance of priorities in a WUP.

## STEPS TO DEVELOP WATER USE PLANS

1. Initiating WUP
2. Scoping
3. Planning Consultations
4. Measuring Objectives & Performance
5. Gathering Data
6. Creating Alternatives
7. Assessing Tradeoffs
8. Recommending Documentation
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## 2002 ELECTRICITY PLAN

**British Columbia's demand for electricity continues to grow. With existing and committed facilities, BC Hydro can meet customer needs until 2006/07. Beyond 2007, electricity could be supplied from a wide range of resources such as energy conservation, wind, small and micro-hydro, pumped storage, biomass, fuel cells, wave, thermal and large hydro.**

**Over the next year, BC Hydro will be exploring these options and developing a plan to ensure British Columbians have adequate electricity well into the future.**

# ENVIRONMENTAL

# BOTTOM LINE

BC Hydro's environmental bottom line is founded on managing impacts associated with generating, transmitting and distributing large volumes of electricity within a vast, ecologically diverse service area. Safeguarding the earth's capacity to continue to meet people's wants and needs is the basis on which to grow our business into the future.

The emphasis we place on limiting and mitigating the effects of our activities is matched by our attention to eco-efficiency – extracting maximum energy benefits while leaving a minimal environmental footprint. We reduce the demands we place on the natural world by improving output, making optimum use of resources and doing more with less.

The third complementary aspect of our environmental bottom line is developing power from new, green sources to help meet growing requirements for electricity. We are investing in alternative technologies to diversify our energy portfolio with clean, renewable, reliable generation from wind, woodwaste, hydrogen, micro hydro and other potential resources.

ECONOMIC
INTEGRATION

# MANAGING IMPACTS

BC Hydro has developed management systems and operating policies to integrate environmental considerations into our day-to-day activities. Among the mechanisms and processes in place are environmental audits, a range of environmental management systems and programs to manage specific areas of concern such as fish and animal habitat, materials, waste management and sulphur hexafluoride ($SF_6$) gases. Measures to minimize and manage impacts continue to be developed, implemented and refined as required.

## ENVIRONMENTAL MANAGEMENT SYSTEMS

All our business units are in the process of implementing environmental management systems (EMS) as part of our efforts to operate British Columbia's power system in a sustainable manner. An EMS helps us systematically and consistently manage our activities in an environmentally responsible manner across the organization. Systems are based on ISO 14001, recognized worldwide as a standard for environmental management.

BC Hydro began formalizing an EMS in 1995, when development of our first system was initiated. We now have one integrated EMS for all of BC Hydro, consisting of three distinct business areas and an overarching corporate-level EMS.

EMS efforts continued last year in parallel to other critical initiatives associated with change management, green energy, sustainability and related concerns. We also expended considerable effort reviewing and fine-tuning systems already in place.

Status of individual components varies, as follows:

- Our Corporate EMS was endorsed by BC Hydro's President and CEO in December 1999 and completed its first business cycle in 2000. Review, analysis and stakeholder feedback last year prompted senior management to confirm BC Hydro's Environmental Responsibility Policy adequately reflected our environmental commitments, that key environmental issues and aspects were correctly identified, and that the Corporate EMS was suitable and effective for carrying out the policy.
- Power Supply, our electricity generation group, developed its EMS in 1999. Systems have been implemented in the business unit's Power Facilities and Resource Management areas, and work to fine tune and strengthen the EMS continues (see audits).
- Transmission and Distribution (T&D), our electricity delivery group, has completed an ISO 14001-consistent framework for its environmental management. Training for responsibilities and procedures was provided to all managers last year, and the business unit is now preparing process-based EMS modules for each of 22 functions, as well as best management practices for a range of materials, equipment and activities. T&D continues to be on track to implement all components of its EMS by December 2002.
- An EMS for our Shared Services group – which covers all activities outside Power Supply and T&D, such as building and office services, property management, vehicle services and purchasing – is under development.

## SYSTEM AUDITING

BC Hydro regularly commissions reputable external auditors and internal verification teams to evaluate the status of EMS in key areas. These audits are an objective means of assessing whether our management and staff do their jobs in accordance with BC Hydro's Environmental Responsibility Policy and the provisions of ISO 14001.

Developing and implementing EMS modules across the company has increased demand for a consistent, corporation-wide environmental audit program. In consultation with representatives from all our business groups we are finalizing a framework for such a program. A model was developed last year and is being implemented in 2001.

Six audits were conducted in 2000 under our existing review systems.

Internal teams conducted two audits prior to our ISO 14001 registrar coming on-site to conduct routine surveillance audits at the following two facilities:

- The registrar's review of Burrard Generating Station EMS concluded the system continues to be effectively implemented, and identified two minor non-conformances related to implementing existing procedures – one for document control, the other for staff training.

- The registrar's review of Prince Rupert Generating Station EMS found it conformed to registration requirements.

Four reviews were conducted using external lead auditors:

- Power Supply EMS;
- T&D Materials Management Business Unit;
- T&D Surrey Oil Operations; and
- T&D Maintain Stations.

Final reports for these four reviews were due by May 2001. Managers responsible for the audit areas will prepare corrective action plans to address findings.

## ISO 14001

We are participating in the Environmental Commitment and Responsibility (ECR) program developed by the Canadian Electricity Association (CEA). Under the program, we are committed to continual environmental improvement as an integral part of good business performance, which includes implementing an ISO 14001-consistent EMS. Decisions to pursue ISO registration are based on individually prepared business cases.

To date, two of our key business assets – Burrard Generating Station and Prince Rupert Generating Station – received ISO 14001 certification, confirming their ability to properly manage and continually improve their environmental performance.

We will pursue ISO 14001 registration for our Surrey Oil Operation facility in 2001. And we are continuing to investigate the benefits of acquiring ISO 14001 certification for our EMS modules covering Power Supply and Transmission and Distribution.

## SPILLS AND SITE PROTECTION

BC Hydro has materials handling and storage practices in place to prevent spills and their impacts on water and land. For example, since 1992 we have upgraded containment measures at facilities with significant oil and fuel storage and completed oil spill contingency plans for our operations.

Under our Contaminated Site Management program, we assess properties for evidence of impacts from historic leaks and spills. In progress since 1997, the program has now completed investigations at all our operating diesel generating stations, where significant volumes of fuel have been stored over the years. Assessments of soil or groundwater – or both – were also conducted at twelve other locations. Remediation was initiated at six sites, including two sites where significant fuel spills occurred this fiscal year.

As well, we completed an inventory of environmental sensitivities and risks at 35 of our largest pole-storage yards. The assessment helped us identify which sites may require mitigation in order to prevent impacts.

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WE ARE COMMITTED TO CONTINUAL ENVIRONMENTAL IMPROVEMENT AS AN INTEGRAL PART OF GOOD BUSINESS PERFORMANCE

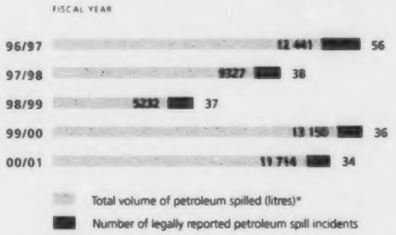
## ENVIRONMENTAL INCIDENTS

Despite our best efforts to prevent spills, mishaps still occur. BC Hydro recorded 138 environmental incidents in 2000/2001, including 89 spills, of which 81 involved oil or petroleum. Thirty-four of these spills met regulatory definitions of incidents requiring a report to government agencies. We also had 18 gaseous discharges and 31 fish-related incidents.

Significant spills and clean-up actions last fiscal year included:

- Boston Bar Diesel Generating Station (DGS), where 2000 litres of diesel spilled on the ground as a result of a faulty valve. Approximately 200 tonnes of visibly contaminated soil was excavated and removed to a licensed facility for treatment.
- Telegraph Creek DGS, where 2400 litres of diesel fuel spilled on the ground after a valve was improperly closed. Contaminated soil was dug out and stored pending approval of permits for local remediation, which was expected to proceed this past spring. To prevent recurrence, the valve was redesigned to reduce the chance of human error and new operating procedures were established.
- As the result of an electrical fault that damaged an oil-filled cable, about 1900 litres of insulating oil leaked into the ground from an underground transmission cable at Murrin substation in Vancouver. Clean-up involved excavating all contaminated soil and asphalt from around the cable and storing the materials for later bioremediation. The spill was contained within a four-metre-square area and cleaned up to a standard that exceeded city requirements.

TOTAL VOLUME OF PETROLEUM AND OIL SPILLED AND NUMBER OF LEGALLY REPORTABLE SPILL INCIDENTS



*Note: Volume of oil and petroleum spills are field estimates only

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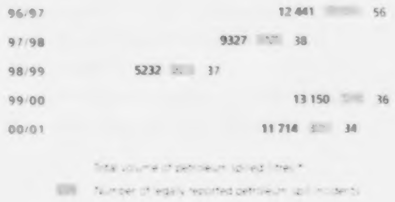


*Total volume of oil and petroleum spills are estimates only

## WASTE AND MATERIALS MANAGEMENT

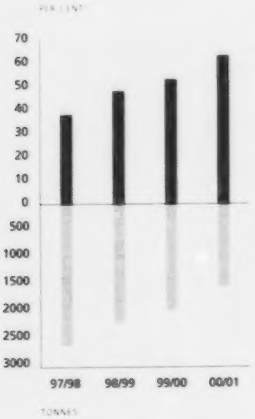
BC Hydro diverts wastes in order to use as much material as possible, reducing pressures on limited landfill space. Our comprehensive waste management program diverted 63 per cent of our waste from landfills in 2000, well above the 50 per cent target recommended by the B.C. government.

Diversion tactics included recycling approximately 2600 tonnes of paper and cardboard, wood poles, scrap metal, toner cartridges, batteries, ceramic insulators and fluorescent lighting tubes.

From the cafeterias at our Edmonds and Dunsmuir business centres, we also collected more than 32 tonnes of organic materials for composting and processing into organic fertilizers.

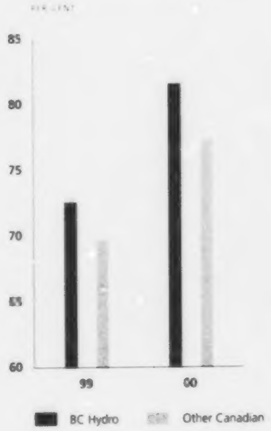
We diverted approximately 30 per cent more material in 2000/2001 than in the previous year with plans to expand the scope of the program to include landscape materials, we expect volumes to increase again this year.

DIVERSION RATE OF TOTAL MUNICIPAL SOLID WASTE



MUNICIPAL SOLID WASTE TO LANDFILL

INSULATING OIL REUSED



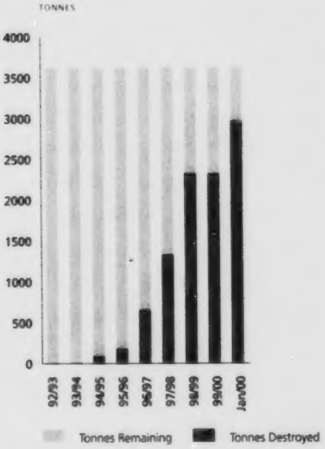
## PCB MANAGEMENT

Polychlorinated biphenyls (PCBs) are synthetic chemicals once commonly used as fluids in some electrical equipment. Canada banned the import and manufacture of PCBs in 1979 due to health and environmental concerns. Since then, BC Hydro has been phasing out and replacing equipment containing PCBs.

We allocated $33 million in fiscal 2000/2001 to cover the cost of eliminating all our PCBs over the next ten years.

We arranged destruction of 641 tonnes of High Level PCB waste last year and have eliminated about 80 per cent of our inventory since destruction facilities became available to BC Hydro in the early 1990s. BC Hydro manages both classes of PCBs common to electrical utilities: oil contaminated with traces of PCBs, known as Low Level PCB, with concentrations typically ranging from 50 parts per million (ppm) to 500 ppm; and contaminated soils and equipment such as capacitors and transformers filled with 40–100 per cent PCB, known as High Level PCB. As part of our regular upgrading program we continue to replace in-service equipment containing PCBs, and investigate PCB contamination in distribution transformers with PCB levels above government-established limits.

INVENTORY OF HIGH LEVEL PCBs (STORED AND IN SERVICE) AND HIGH LEVEL PCBs DESTROYED



* Note High level PCB is any material with PCB concentrations greater than 1% (10,000 ppm)

Using technology owned by BC Hydro, we also operate a plant, Surrey Oil Operations in Surrey, B.C., that removes PCB contaminants from transformers. Output at the plant, which typically treats about 1.2 million litres of contaminated oils each year, fell to 150 000 litres last year due to shortages of key process chemicals, but is forecast to handle up to 2.5 million litres in fiscal 2001. We are also investigating offering the facility's services to outside markets and are considering building a second plant to manage PCB solids.

## WARNINGS AND ACTIONS

In September 2000 the B.C. Ministry of Environment, Lands and Parks (MELP) delivered a warning letter to BC Hydro after approximately 10 litres of non-PCB oil spilled from a transformer that was being removed from our property by a demolition company. Some of the oil spilled onto the edge of a public road and a small quantity entered a nearby slough, resulting in a violation of the B.C. Waste Management Act and the federal Fisheries Act.

Our internal investigation determined responsibility for the spill rested with the subcontractor, who removed the transformer before it was fully drained and plugged. We instituted new procedures to guard against a recurrence, including a formal sequence of steps for removing equipment for disposal and a requirement that work plans, spill prevention plans and environmental protection plans be part of all disposal tenders.

In December 2000 we received a warning letter from MELP noting that, on four occasions, BC Hydro arranged transportation of special wastes using carriers not licensed for such activities, contrary to Special Waste Regulations.

We investigated and found the violations occurred because our shippers allowed carrier trucks to leave BC Hydro sites without ensuring the carrier was licensed to transport special wastes. Corrective measures included advisories to all area managers about legal requirements for shipping dangerous goods. We also developed a checklist for all employees involved in shipping goods, and a training module for proper special-waste management.

The Athabasca Chipewyan and Mikisew Cree First Nations in northeast Alberta have brought two separate actions before the Alberta Court of Queen's Bench against BC Hydro, the Province of British Columbia and Canada. Both First Nations are seeking compensation for alleged impacts downstream of our operations on the Peace River.

The allegations deal with the construction and regulation of the WAC Bennett and Peace Canyon Dams and related impacts on their Reserves and on their way of life.

At the end of fiscal 2000/2001, we were awaiting a decision from the Alberta Court of Appeal regarding the jurisdiction of an Alberta court to hear an action against the Province of B.C. and BC Hydro.

BC HYDRO CONTINUES TO WORK TO BUILD RELATIONSHIPS AND PARTNERSHIPS WITH ENVIRONMENTAL AND SUSTAINABILITY-FOCUSED GOVERNMENT AGENCIES.

## ENVIRONMENTAL REGULATORY RELATIONS

BC Hydro continues to work to build relationships and partnerships with environmental and sustainability-focused government agencies. In this way we increase public understanding of BC Hydro's operations and environmental and sustainability initiatives, and provide opportunities for discussing issues of interest.

BC Hydro is involved in advocacy around a variety of policies, guidelines and legislation. We ensure our views are heard on topics under consideration, including the B.C. Drinking Water Protection Act, the B.C. Fish Protection Act regulations, greenhouse gas policies and programs, alternative and green energy initiatives, and the federal Species at Risk Act.

As well, we are a member of the Interagency Committees for Species at Risk which, with the federal government, is involved in implementing the National Accord for the Protection of Species at Risk. Implementation includes developing plans and strategies for a variety of species and habitat that are at risk.

## HILL AVENUE CIRCUIT CABLE REPLACEMENT PROJECT

Environmental, social and economic objectives were kept in mind while undertaking a project to upgrade one of our distribution substations in 2000/2001.

The cable replacement project between Newell and Hill Avenue Terminal Station in South Burnaby involved replacing two aging below-ground cables that are important links of Metro transmission, and rebuilding Hill Avenue terminal to ensure seismic stability. Economic benefits included the system upgrade and reduced maintenance costs.

Social aspects included working with stakeholders, continuing to provide a reliable supply of electricity and minimizing disruption to local residents. Project mitigation options and approvals to remove vegetation and work in and around water, parks and rights-of-way were discussed and negotiated with several agencies, organizations and community groups.

As part of BC Hydro's authorization for project access across streams, the Department of Fisheries and Oceans (DFO) requested environmental mitigation work and compensation to offset habitat loss. Several projects were integrated into construction work this year, including a concrete fish ladder and box culvert at Robert Burnaby Creek and several fish-friendly culverts on streams entering the south side of Burnaby Lake.

Environmental objectives compensating for habitat loss include mitigating construction impacts and minimizing future risk to the environment. BC Hydro is proposing two fish habitat enhancements this fiscal year: the Lubbock Creek fishway, proposed by the local Streamkeepers group as a way to provide fish access to upstream habitat, and a fish-rearing pond to the east of the creek.

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# ECO-EFFICIENCY

Eco-efficiency means being able to meet the energy needs of our customers in a manner that reduces the intensity of our impacts on the environment to a level in line with the earth's estimated carrying capacity. We are moving towards eco-efficiency by incorporating its principles into our decision-making and by improving bird, fish and animal habitat in areas affected by our operations.

## BIODIVERSITY

Throughout British Columbia we have operations in a full range of ecosystems and in close proximity to diverse fish and wildlife populations. Being eco-efficient includes ensuring we address and minimize, as a result of day-to-day activities, any strains placed on habitats, and support the continued health and abundance of all species.

### BIRD PROTECTION

We are making progress in protecting birds from accidental contact with powerlines. The reported number of mishaps involving eagles is down, the number of trumpeter swan mortalities has declined 90 per cent in areas where lines have been marked, and bird-caused power outages have been reduced following the installation of bird guards on transformers in selected areas.

Also, on Vancouver Island, we began a project to improve protection of bald eagle nest trees. We completed a nest tree inventory in the southern Vancouver Island area, and convened workshops to exchange information with conservation groups working to protect the species and its habitat. We mapped habitat, shared observations about eagle requirements for nesting and perching, and discussed ways to create a safer environment for the birds. Results of the dialogue and work include plans to modify some of our structures to reduce the risk of eagle electrocutions.

### FISH AND AQUATIC ECOSYSTEMS

Concern for fish habitat and populations is incorporated into the management of our day-to-day activities. We also help promote species recovery and health through research and rehabilitation projects sponsored by the perpetual restoration and compensation programs developed to manage impacts resulting from construction of our facilities.

BC Hydro has also contributed $2 million to Fisheries Renewal B.C. in a partnership agreement that saw BC Hydro play a major role in the agency's work to enhance and restore B.C.'s fish stocks. Projects concentrated on fish habitat, water quality, fish passage and strategic planning in watersheds affected by our operations. Funding was divided between habitat restoration and protection work identified by our regional fisheries biologists and environmental staff, and community-generated projects. All the projects were delivered by partnership groups and community coalitions throughout B.C. and included commercial and recreational fishing groups, environmental groups and other local organizations.

## STRATEGIC ENVIRONMENTAL INITIATIVES PROGRAM

**SEIP**

The Strategic Environmental Initiatives Program (SEIP), launched in 1999, moves BC Hydro beyond environmental responsibility in day-to-day operations. SEIP is directed at new, innovative practices that protect and enhance the value of our assets, develop value-added technology and engage customers. The three-year program provides funding for projects that serve our strategic objectives but fall outside the scope of BC Hydro's regular operations. Undertakings include promoting species protection, wildlife diversity and habitat. Several SEIP projects are profiled throughout this report.

## WHITE STURGEON PROTECTION PROGRAM

**SEIP**

A number of special projects focusing on fish and aquatic ecosystems are also funded through our Strategic Environmental Initiatives Program (SEIP), outlined below.

BC Hydro has undertaken a three-year, $1.4 million SEIP program developed to help protect white sturgeon, B.C.'s largest freshwater fish, which are in decline in three North American river systems, including the Columbia River where some of our installations operate. We are working with fisheries agencies, First Nations and stakeholders to find out why adult Columbia River white sturgeon now outnumber juveniles, and why juvenile mortality rates have been so high. The program is focused on working with agencies and stakeholders to find a long-term solution using the best available technical, traditional and local knowledge. There are two components to the work: converting a hatchery in the Columbia-Kootenay region to accommodate rearing of juvenile sturgeon for research, and developing a long-term sturgeon recovery plan.

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BC Hydro has undertaken a three-year, $1.4 million SEIP program developed to help protect white sturgeon, B.C.'s largest freshwater fish, which are in decline in three North American river systems, including the Columbia River where some of our installations operate. We are working with fisheries agencies, First Nations and stakeholders to find out why adult Columbia River white sturgeon now outnumber juveniles, and why juvenile mortality rates have been so high. The program is focused on working with agencies and stakeholders to find a long-term solution using the best available technical, traditional and local knowledge. There are two components to the work: converting a hatchery in the Columbia-Kootenay region to accommodate rearing of juvenile sturgeon for research, and developing a long-term sturgeon recovery plan.

## SPECIES AT RISK

**SEIP**

Through our Strategic Environmental Initiatives Program (SEIP), BC Hydro is identifying ways our activities affect threatened, endangered and vulnerable species in B.C.

In areas where our facilities are located, expertise from across our organization about species at risk is being consolidated into one database. We can then analyze how the species might be affected by our operations, and the biological factors to be considered in developing recovery plans.

The project is our first coordinated approach to examining issues involving endangered or threatened species, including wildlife, fish, birds, plants, reptiles and amphibians. The project is designed to provide a better understanding of how our hydro system interacts with species at risk, and what we can do to address concerns about further decline or extinction of these species.

The project will produce recommendations for further study and recovery plan considerations. It will also provide species-at-risk information for project planning and implementation, and ensure it is considered in our activities.

## REDUCING HISTORIC IMPACTS

Three programs are in place in British Columbia to mitigate historic impacts on fish and wildlife habitat resulting from the construction of hydroelectric facilities. The programs were established by BC Hydro and the former Ministry of Environment, Lands and Parks, and involve multistakeholder consultation on research priorities, remediation projects and other related interests.

### BRIDGE COASTAL RESTORATION PROGRAM

The development of programs to compensate for historic dam-building activity throughout B.C. was completed last year with the establishment of the Bridge Coastal Restoration Program. The program addresses historic impacts on fish and wildlife habitat within fifteen south-coastal and south-central B.C. watersheds affected by construction of our facilities in the area. All of our hydro facilities are now included in programs that compensate for historic impacts.

The primary goal of the program is to address impacts on fish and wildlife. However, the program also allows for significant First Nations, public and agency involvement, and aims to create long-term value-added benefits for all. In this way, we hope to increase the fairness, credibility and transparency of the program's decision-making processes, improve program results, and build and maintain public support for our operations.

The inaugural nine-member board was appointed in January 2001 and is made up of three people representing each of the general public, First Nations and government (including BC Hydro and government agencies). The board is now actively involved in allocating program funds for this fiscal year.

The program, which provides $1.5 million in annual funding for restoration projects, launched twenty-eight projects in its first year using interim funding allocated prior to forming the inaugural board. Its first action was a $250,000 contribution to Nature Conservancy Canada to help purchase nearly 47 acres of estuary land considered crucial to the ecosystem of Campbell River on Vancouver Island.

The program also provided $80,000 to help convert the Upper Seton spawning channel for year-round use by multiple fish species, in cooperation with the Stl'atl'imx First Nation, Cayoose Creek and Bridge River bands, Ainsworth Lumber Company, the Department of Fisheries and Oceans, former B.C. Ministry of Transportation and Highways, and former B.C. Ministry of Environment, Lands and Parks. The two channels, located downstream of Seton Dam, were originally operated every two years as spawning habitat for pink salmon.

## PEACE-WILLISTON FISH AND WILDLIFE COMPENSATION PROGRAM

The Peace-Williston Fish and Wildlife Compensation Program (PWFWCP), launched in 1988, compensates for fish and wildlife impacts resulting from construction of our W.A.C. Bennett and Peace Canyon dams in north-central B.C.

The PWFWCP directed $1.56 million towards projects in 2000/2001, including $360,000 in special expenditures over and above regular budget levels. We directed a total of nearly $939,000 towards fisheries work, and almost $573,000 to wildlife projects.

Nine wildlife projects were undertaken last year. For example, we investigated the extent and cause of winter tick infestation on Stone's sheep wintering at low elevation along the north side of the Peace Arm of the Williston Reservoir. We also attached radio collars to ten sheep and three elk and are monitoring their movements by aerial telemetry.

Among our twelve fish projects, we collected Pygmy, mountain and lake whitefish samples to determine if there were physiological differences that could distinguish the species in the field. Work included collecting about 75 pre-spawning fish in October and recording biological data. We captured four mature Pygmy whitefish in Dina Lake and held them in an aquarium in Prince George to determine the approximate spawning date. Eggs from the aquarium are now being incubated to determine if they are viable for the project's next stage.

## COLUMBIA BASIN FISH AND WILDLIFE COMPENSATION PROGRAM

The Columbia Basin Fish and Wildlife Compensation Program (CBFWCP) allocates $3.2 million a year for projects to address habitat impacts resulting from construction of our dams on the Columbia and Duncan rivers in southeastern B.C.

CBFWCP was established in 1994 and operates in partnership with local conservation groups and First Nations to deliver projects that benefit resident fish and wildlife. Since the program's inception approximately $20 million has been invested in over 400 projects involving over 400 interest groups in the region.

Last year CBFWCP produced a handbook for stakeholders describing each project by geographical area and providing information for local community groups interested in submitting fish or wildlife project proposals for funding.

The program delivered 59 fish and wildlife projects with 123 partners in 2000/2001, including 16 projects directed at species at risk in the region. Of that total, 21 projects involved fish and 38 were directed at wildlife.

Fisheries work is dominated by experimental fertilization projects at Arrow Lakes Reservoir and Kootenay Lake, which account for over 60 per cent of the $1.6 million in the program's fish budget. The projects address impacts on fish stocks attributed to nutrient deficiency caused by the trapping of nitrogen and phosphorus behind upstream dams. Kokanee populations have increased by about 800 per cent in Kootenay Lake since fertilization began there in 1992 to boost production of phytoplankton at the bottom of the food chain. And the abundance of kokanee has more than tripled in the Arrow Lakes Reservoir, where fertilization began in 1999.

## PHOSPHATE RECOVERY RESEARCH

SEIP

BC Hydro's Strategic Environmental Initiatives Program (SEIP) donated $120,000 to the University of B.C. to develop a system to recover phosphates from municipal and agricultural waste treatment facilities.

The phosphates could be an alternative source of a crucial [illegible] for aquatic and terrestrial systems. The world's current supply, derived from mined phosphate rock, is finite [illegible]

BC Hydro believes recovering phosphates from waste will provide reservoir renewal and stream fertilization opportunities, and improve our productivity and efficiency by lowering fertilizer costs.

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## VEGETATION MANAGEMENT

To maintain security of service, BC Hydro controls vegetation in and around facilities and along transmission and distribution power line rights-of-way. We also concern ourselves with maintaining enough natural cover to support fish and wildlife habitat needs.

Our vegetation management systems are site-specific and incorporate environmental considerations. Integrated approaches are applied along transmission corridors to control tall-growing species that could come into contact with lines, and to encourage low-growing plant communities. Along distribution rights-of-way we use recognized arboricultural techniques to prune vegetation to within a prescribed distance from lines, redirect growth away from lines and remove hazardous trees.

Last year, at Fee Creek north of Mount Currie, we worked with the Stl'atl'imx First Nation to replace tall-growing trees on our transmission line corridor with a variety of wetland shrubs. The new vegetation removed the need to periodically send in crews to top trees near the creek, thereby reducing impacts on the creek's sensitive fishery. The project also enhanced education and recreation opportunities in the area and improved our system reliability.

Vegetation management efforts have focused in recent years on standardizing processes and practices, and compiling a storehouse of knowledge about site-specific land features and environmental requirements that help shape management prescriptions for different areas. Mapping of sensitive areas is nearing completion in the Lower Mainland, where more than 98 per cent of approximately 3000 streams crossed by our transmission system are now inventoried and classified according to fish-bearing capability. Site-specific prescriptions for each of these stream crossings are being developed this year.

## ARROW LAKE RESERVOIR REHABILITATION

**SEIP**

A dust control program has helped create a nature oasis on the flats within Arrow Lake Reservoir near Revelstoke.

The program began a decade ago with spring plantings of rye and reed canary grass on the 860-hectare area of old riverbed that was exposed and covered in silt-like dust when reservoir levels dropped. Planting stopped the dust storms that arose with spring squalls, and helped create an area rich in aquatic, plant and wildlife

Today the area is inhabited by a diverse range of wildlife, from eagles and blue heron to songbirds, waterfowl and insects. As the grasslands grow, more deer, elk and moose are using the area. The new vegetation has increased insect production, leading to more songbirds and helping the rainbow trout fishery in the reservoir. Increased abundance of fish is accompanied by more frequent sightings of eagles, osprey and blue herons.

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## PUBLIC USE OF RIGHTS-OF-WAY

Where system security and public safety allow, we are opening more and more of our power line rights-of-way to shared uses. New and expanded uses for corridors include enhanced habitat for wildlife, walking and cycling routes, cultivation of trees and medicinal plants, tennis and golf courses, and skiing, snowshoeing and snowmobiling. Two of our rights-of-way sections – one in West Vancouver, the other in Surrey – were recently included in the Trans-Canada Trail.

Last year, in partnership with the Greater Vancouver Regional District's regional parks department, we published an atlas of recreational access to BC Hydro rights-of-way in the Lower Mainland. The 70-page book provides a snapshot of areas where recreationally used trails and greenways coincide with our power line corridors. It includes a set of geographically referenced index maps depicting formal trails, informal access and intersecting trails. The information is useful to BC Hydro for long-range recreational and multi-use planning, and to regional recreation greenway planners.

SEIP is investigating rights-of-way as possible sites for growing non-timber forest products, including wild edible mushrooms, floral and greenery products, medicinal and pharmaceutical products, wild berries and fruit, herbs and vegetables, landscaping products and craft materials. If successful, the ventures would provide ecologically sensitive ways to manage vegetation on our rights-of-way while boosting social and economic development opportunities for local communities.

Three interrelated SEIP projects are underway or pending to explore the commercial feasibility of the above concept. Projects launched to date include a test planting in Nanaimo to explore the suitability of using rights-of-way as growing sites, and a study on the Sunshine Coast to assess commercial harvesting. A third project, yet to begin, involves First Nations training.

## CREATING URBAN GREEN SPACES

SEIP

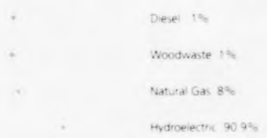
Improving recreational opportunities on rights-of-way sometimes involves extensive changes to sites. At HiKnoll Park in Surrey and the North Vancouver Recreational School in Squamish, BC Hydro worked with local municipal governments and key stakeholders to develop site-specific applications to convert rights-of-way for public use. In both cases, all trees were removed over several years, followed by extensive planting of sub-storey species that will never grow high enough to threaten power lines.

The Serpentine Greenway is another example of a successful melding of urban-space needs with rights-of-way uses. The SEIP project, created in cooperation with the City of Surrey, is a multi-use pathway open to recreational use by walkers, joggers, cyclists and in-line skaters. Designated as an official spur of the Trans-Canada Trail network, it also contains native and exotic plants that provide habitat for a range of wildlife including voles, herons, hawks and coyotes. The long-term goal is to extend the trail from Tsawwassen to Fort Langley.

## GHG EMISSIONS

As a predominantly hydroelectric utility, BC Hydro is one of the lowest emitters of GHG emissions in North America. GHG-free hydroelectricity accounted for 92 per cent of the electricity supplied by the BC Hydro system in 2000, including 91 per cent from hydro electricity and one per cent from woodwaste. However, our emissions are rising due to the growth in electricity demand, and our decision to meet the majority of that growth through additional natural gas-fired capacity.

BC HYDRO'S SYSTEM
POWER SUPPLY



## SUSTAINABILITY ACTION PLAN INITIATIVE

## ECO-EFFICIENT TRANSMISSION AND DISTRIBUTION

We have proposed projects in five key areas to reduce the ecological footprint of our Transmission and Distribution (T&D) business unit. Projects will address:

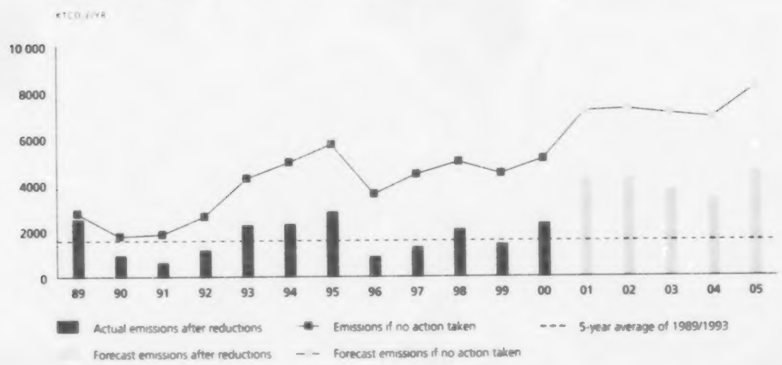
- enhancing fish and wildlife habitat;
- applying innovative pollution-prevention technologies;
- improving understanding of the environmental effects of our business;
- making more efficient use of natural resources; and
- expanding public access and recreation opportunities, among other [illegible] benefits.

Specific project elements include aquatic habitat enhancement work, wildlife management initiatives tied to vegetation maintenance activities, trail and recreational development, and enhancements for mammals, waterfowl and species at risk.

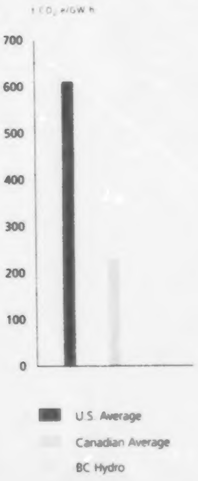
These measures would develop a long-term focus to complement T&D's existing emphasis on addressing regulatory compliance, due diligence and risk. T&D also seeks to help sustain fish and wildlife resources affected by our facilities by enhancing remaining habitat through [illegible] planting, [illegible] and [illegible].

# BC HYDRO IS ONE OF THE LOWEST EMITTERS OF GHG EMISSIONS IN NORTH AMERICA

TOTAL BC HYDRO SYSTEM EMMISSIONS (1989–2005)

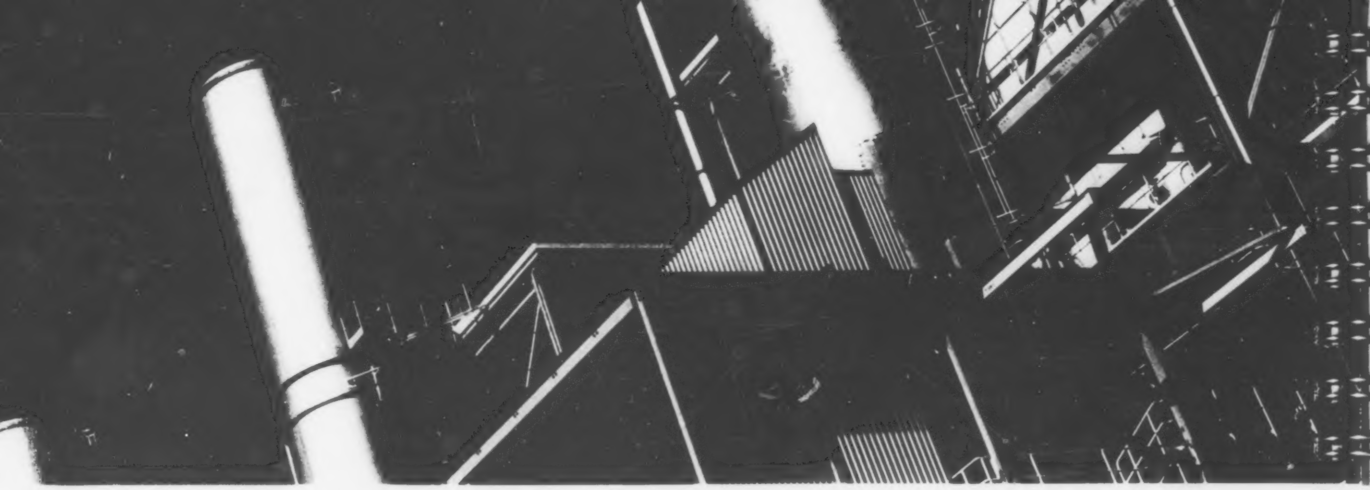


GHG INTENSITIES (PER UNIT OF ELECTRICITY GENERATED)



## SUSTAINABILITY ACTION PLAN INITIATIVE

## ECO-EFFICIENT GENERATION



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These measures would develop a long-term focus to complement T&D's existing emphasis on addressing regulatory compliance, due diligence and risk. T&D aims to help sustain fish and wildlife resources affected by our facilities by enhancing remaining habitat through assessment, planning, implementation and monitoring.

## ECO-EFFICIENT GENERATION

New and additional funding is being provided for initiatives that would help us add more "eco-efficient" generation to BC Hydro's system.

Funding supports work to help build our understanding of social and environmental impacts of our generating activities, and ways they can be overcome to generate more electricity from existing installations.

The program's focus includes work associated with implementing a recovery plan for Columbia River white sturgeon (see White Sturgeon Recovery, page 43). The project involves ongoing research, hatchery modifications, hatchery brood collection and operations, and flow testing.

The program also includes investigation work associated with Site C, which would add 900 MW of generating capacity to our system through a third facility on the Peace River to join our existing G.M. Shrum and Peace Canyon dams. Funding would be used to update the project-cost estimates to be used as part of the 2002 Electricity Plan Process. Site C cannot proceed without licensing approval and a review process that would evaluate social, environmental and economic considerations.

As well, funding is being provided to advance Resource Smart projects that have a benefit of boosting energy by approximately 150 GW·h per year. Resource Smart, our program to optimize generating facilities, has added 578 GW·h per year of new energy since 1988. Projects underway this year will add another 648 GW·h per year by 2004.

## ACTIONS ON GHG EMISSIONS

We are committed to limiting the growth of GHG emissions from our electrical system, wherever economically feasible. At the same time, BC Hydro is challenged by environmental, social and economic considerations that encourage us to expand our existing generating capacity in small increments. Increased generation from natural gas sources poses a significant challenge to our efforts to reduce the growth of BC Hydro's GHG emissions. Our Climate Change Action Plan, submitted to the Voluntary Challenge and Registry (VCR) Inc., outlines a multipronged approach to managing these emissions through measures directed at internal operations, our customers, green energy purchases and emission offsets at other locations.

Activities and the progress made to support the BC Hydro Climate Change Action Plan are discussed in our annual Greenhouse Gas Report, and include:

- **STRETCHING OUR RESOURCES** – Our Resource Smart program, which improves the efficiency of hydro plants across our system, gained BC Hydro 578 gigawatt-hours (GW·h) of GHG-free energy last year.
- **HELPING CUSTOMERS SAVE** – Annual Power Smart savings reached 2262 GW·h in 2000, equivalent to almost 1.2 million tonnes of avoided GHG emissions. Since its inception in 1989, Power Smart has helped us avoid more than 9.8 million tonnes of GHG emissions.
- **CHOOSING CLEANER POWER** – We purchased 2691 GW·h of "cleaner" electricity from independent B.C. power producers in 2000 to displace fossil-fuel generation from our thermal plants.

## SEVEN MILE DAM

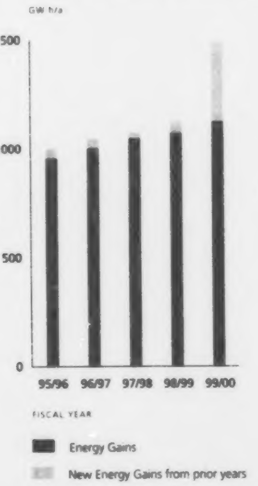
Increasing the generating capacity at BC Hydro's Seven Mile Dam and power plant near Trail is expected to contribute significant GHG emissions savings beginning in 2004.

The Resource Smart project involves installing a fourth generating unit at the plant to boost generating capacity by 210 megawatts and add 302 gigawatt-hours to BC Hydro's annual hydropower output. The increased hydro production is expected to reduce GHG emissions by 170 000 tonnes per year.

Installation of the fourth Seven Mile unit began in 2001 and will take about three years to complete. The plant, located on the Pend d'Oreille River near Trail, was originally designed to house four generating units. It opened in 1979 with three turbines.

- **OFFSETS INVESTMENTS** – We are investing in projects to mitigate GHG emissions at our facilities by lowering, avoiding or capturing and storing emissions at another source. Last year we pledged to offset 50 per cent of the increase in GHG emissions from two new gas-fired generating facilities on Vancouver Island through 2010.
- **$SF_6$ MANAGEMENT** – A program was initiated in 1999 to track sulphur hexafluoride ($SF_6$) losses from equipment. Each time $SF_6$ is used from a cylinder, the bottle is weighed and we record which piece of equipment receives the gas. The system produced its first data in 2000 – an estimate that total losses for the year were approximately 357 kilograms, or 3.25 per cent of the amount of $SF_6$ in inventory. Plans are underway to reduce this leakage.

RESOURCE SMART ENERGY GAINS



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- [illegible]

## GHG MITIGATION

A key part of our strategy to limit growth of GHG emissions from our electrical system involves investing in projects that "offset" emissions in one place by lowering, avoiding or capturing and storing emissions at another source.

This year we pledged to offset 50 per cent of the net increase in emissions from the two new natural gas-fired generating facilities on Vancouver Island. Our commitment includes offsetting 300 000 tonnes annually from the Island Cogeneration Project in Campbell River, scheduled to be in service in 2001, and 350 000 tonnes annually from the proposed Port Alberni Generating Plant, planned to be in service by 2004.

# GREEN ENERGY

Becoming a sustainable energy company will require us to produce more electricity from sources that are renewable, have low environmental impact, are generated in a socially responsible manner and are licensable. These green sources will help us meet future growth in demand for electricity.

## GREEN ENERGY ACQUISITION

As part of our goal of deploying cleaner energy sources to meet growth in demand for electricity, BC Hydro is committed to developing new generation with zero or minimal GHG emissions.

In 2000 we pledged to acquire enough green energy to serve at least 10 per cent of our new load by 2010. Our voluntary 10 per cent target is expected to be met in the short term through purchase agreements with independent power producers who generate electricity using proven green technologies such as small hydro and biomass. In the longer term, we will seek opportunities to develop other technologies that can provide reliable, cost-effective and environmentally responsible power to our customers.

Last year we invited power developers in B.C. to submit proposals for new generation projects to deliver green energy to our electricity grid. Discussions produced one firm agreement to date, involving up to 100 gigawatt-hours of electricity a year from a 25-megawatt small hydro facility near Pemberton. Construction of the plant is to begin this spring, with the first electricity delivered to our system in the spring of 2003.

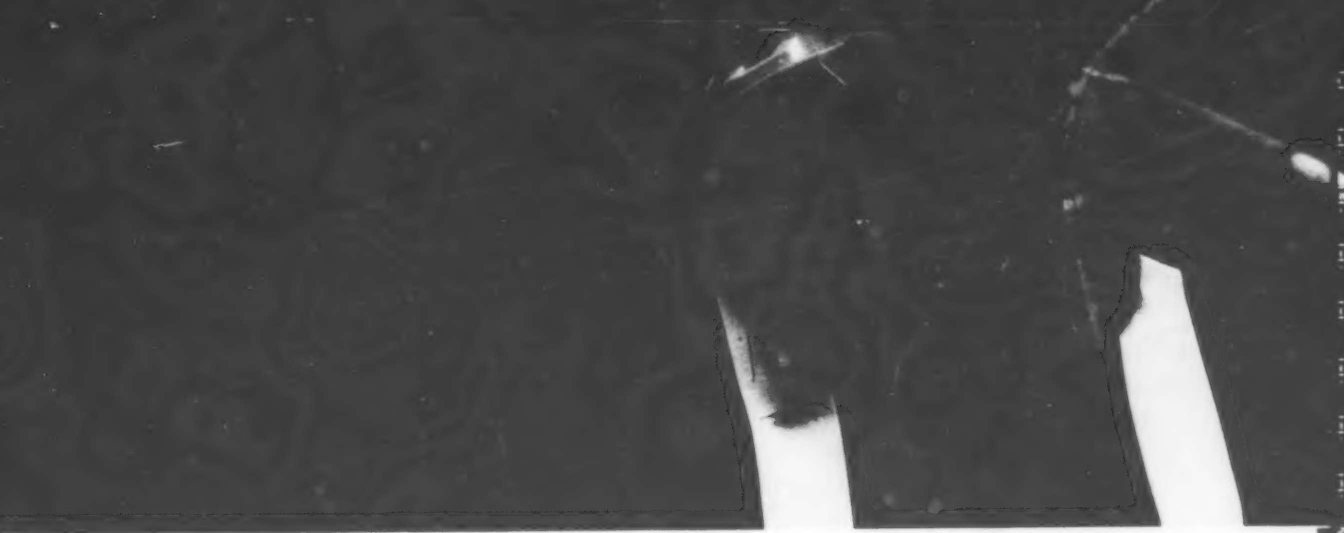
## GREEN AND ALTERNATIVE ENERGY DIVISION

Responsibility for alternative and green energy developments is consolidated within a new BC Hydro operating division.

Launched under the auspices of our Sustainability Action Plan, the Green and Alternative Energy Division will address strategy, policy, technical and business development aspects of emerging and alternative energy opportunities.

The division will work with others in the organization to screen and evaluate the available range of near-term green supply options, including small hydro and woodwaste technologies.

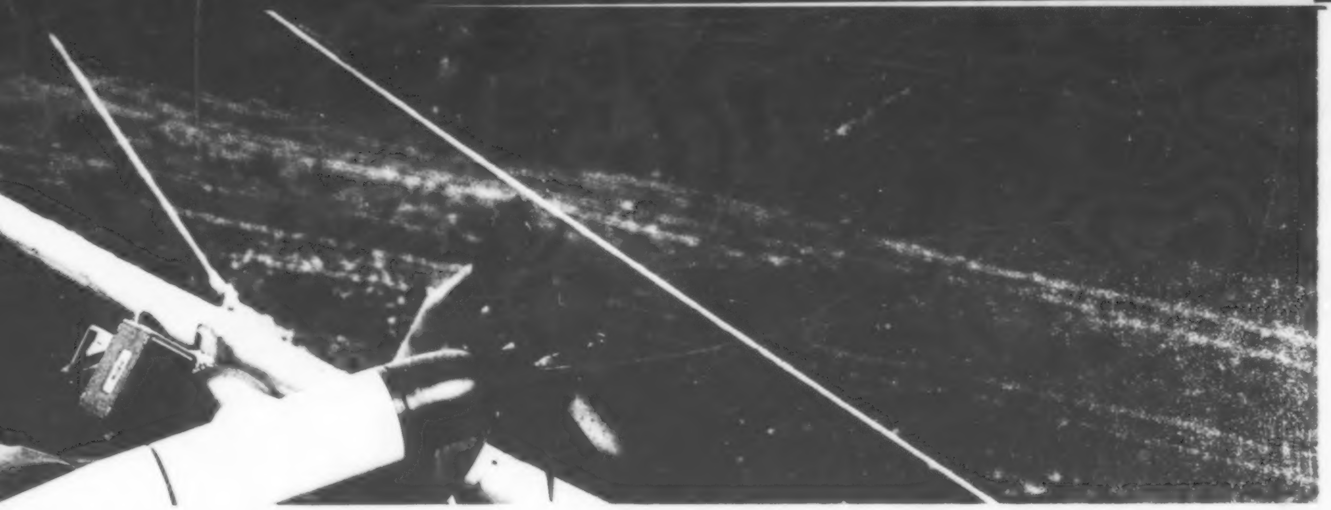
The division will also evaluate and support the development of other green energy sources – wind, micro hydro, community energy planning and emerging biomass technologies – that could contribute to our energy portfolio, if proven to be socially, technically and economically viable.



## GREEN ENERGY RESEARCH AND DEVELOPMENT

Our recognition of the importance of sustainability is reflected by our action to create a separate Green and Alternative Energy Division within BC Hydro, to encourage research and development of emerging green energy technologies that have not been actively pursued to date in B.C. We are especially interested in wind power, biomass and micro hydro technologies. Work to date has focused on the research and analysis of near-commercial green initiatives, which yielded a number of advances that move us towards the launch of several projects.

- **WIND** – Our investigations of wind power potential in 2000 included establishing six wind-speed monitoring towers at promising locations in B.C., where the wind resource, seasonal variability and consistency of the wind were assessed at each site. We also completed a wind energy resources map of B.C., using advanced computer technology, to help us identify additional sites for wind studies.
- **BIOMASS** – Biomass is energy produced from organic sources such as wood, other plant material or municipal waste. The most common source of biomass energy in B.C. is sawmill woodwaste. Last year, in preparation for a larger-scale demonstration that would produce five to six times more energy, we co-funded a pilot project in Kelowna that produced heat and electricity from surplus woodwaste using innovative gasification technology developed by Etho Power. We also continued to explore opportunities to support development of other woodwaste-utilization technologies.
- **MICRO HYDRO** – Micro developments with little environmental impact are usually located on small creeks or streams that are impassible to fish and that rely on simple diversion structures or "run-of-the-river" flows that do not flood land. Progress in our investigations in 2000 included completing an inventory of potential development sites in B.C., continuing work on a handbook for site development, and identifying potential sites to test both the handbook and interconnection requirements.
- **VANCOUVER ISLAND GREEN ENERGY RESOURCES** – A preliminary study is underway on Vancouver Island to explore potential sources of green energy for the region, with an emphasis on renewable, low-impact and socially responsible power such as wind, small and micro hydro, biomass, pumped storage and wave energy. Early results are encouraging and provide a solid base for more detailed assessments now underway. The Vancouver Island Green Energy Resources Study is phase one of a larger B.C. Green Energy study that will be completed in conjunction with our 2002 Electricity Plan (see page 31).
- **COMMUNITY ENERGY PLANNING** – We are investigating ways to integrate energy supply and demand for entire communities. Last year we contributed to the study of alternative energy sources in Nemiah Valley, a remote community not connected to our power grid. The study is exploring the potential for wind and micro hydro generation to power the community. Two wind-monitoring towers have been established as part of the project, and two potential micro hydro sites are being investigated.



## DOMESTIC AND EXPORT GREEN ENERGY MARKET DEVELOPMENT

We have initiated two efforts to explore options and opportunities for developing green energy markets:

- The Domestic Green Energy Market project is designed to determine B.C. customer needs, desires and awareness regarding green energy. The project will focus on the best ways to market green energy in B.C., and ways to help recover the costs of developing and offering specific products and initiatives.
- The Export Green Energy Market project is designed to investigate green potential outside B.C. through research to determine standards for green energy in different jurisdictions across western North America, and involves use of an independent third party to certify that our green energy sources meet those standards.

# ECONOMIC

# BOTTOM LINE

Financial efficiency and productivity are the bases of our economic bottom line. It means we aspire to operate efficiently in order to generate profits to support the continuity of our business.

By giving us the means to develop and offer the best energy solutions and efficiencies available today, our financial strength allows us to provide maximum value to customers. Focusing on our customers also contributes to their satisfaction and loyalty, thereby protecting our market from competitors.

As our customer base broadens and BC Hydro's economic strength grows, we are able to consider and invest in new business opportunities that promise to consolidate and expand our business and enhance our ability to sustain social, economic and environmental performances for the benefit of British Columbians.

INTEGRATION

ECONOMIC

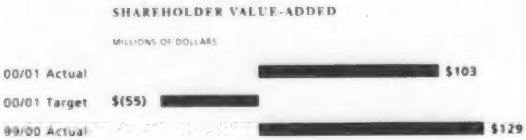
# FINANCIAL EFFICIENCY AND PRODUCTIVITY

BC Hydro has a fiscal responsibility to generate profits for the people of British Columbia. We support the economic lifeblood of the province, and the value we create produces revenue to help the B.C. government provide essential services such as hospitals, schools and roads.

## FINANCIAL OVERVIEW

Our 2000/2001 financial performance was exceptional. We generated record profits and export sales, allowing us to invest significant sums of money in long-term sustainability ventures underway within BC Hydro, and in communities throughout the province. We also contributed substantial sums of money to the provincial treasury through dividends, resources rents and taxes (including water rental fees), corporation capital tax and school taxes.

Our strong earnings led us to pay $372 million to the B.C. government as a dividend; credit our residential customers a total of $310 million as a government-directed rebate to help offset high natural gas costs; and channel $103 million to our Rate Stabilization Account, a fund designed to protect domestic customers from electricity rate increases. We also expanded our existing commitments by allocating approximately $80 million in new funding for a range of projects including sustainability, environmental clean-up, gain sharing, scholarships and maintenance.



Our strong financial performance and the benefits that flowed from it were primarily due to increased revenue from electricity trade activities during extreme energy market volatility in North America in 2000/2001. Domestic revenues also increased as a result of customer growth in the residential, light industrial and commercial sectors, including the return to production of several major mining customers who had shut down part of the previous year.

At the end of the fiscal year, our statement of operations sheet showed profit of $446 million from total sales of $7,889 million. Sector performance for 2000/2001 included electricity trade of $5,458 million, domestic sales of $2,431 million, and $524 million in revenue from large industrial customers. The year before, totals were $1,129 million, $2,351 million, and $482 million, respectively.

## SYSTEM FLEXIBILITY

The flexibility of the BC Hydro electric system allows us to change the level of our generation output to meet differing supply and demand conditions. This flexibility is of considerable benefit because it enables us to respond quickly to changing market conditions. For example, BC Hydro is able to buy electricity from outside hydro systems in lower-priced periods, and sell into the electricity marketplace when prices are higher. These actions earn additional revenue for BC Hydro and the province.

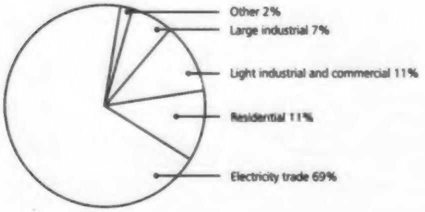
BC Hydro's energy system is designed and managed to meet domestic power needs even in low-water years. Sufficient volume is retained in reservoirs to meet customer demand over successive low-water years, and the hydro system is further augmented by thermal generating resources that can be brought on-line as required. Energy can also be imported from other utilities in the region.

Our hydro-based system depends on plentiful snowpacks and rainfall to fill reservoirs with power in waiting. Reservoir inflows are projected to be 86 per cent of normal this year, and indications are that 2001/2002 may be one of our driest years on record.

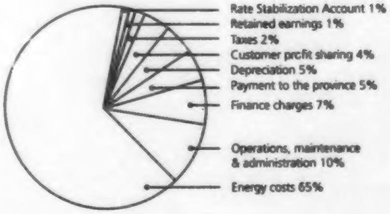
BC Hydro's ability to provide electricity to British Columbians will not be put in jeopardy as a result of low water levels. However, they may affect our operating flexibility and the level of profits earned from energy exports.

A combination of increased thermal generation operations, more electricity imports and fewer electricity exports is also expected, which could mean an overall weaker financial picture for the company in 2002.

SOURCES OF REVENUE



ALLOCATION OF REVENUE



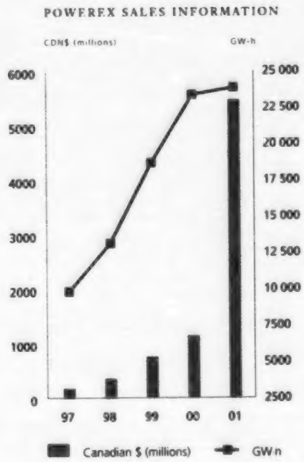
## ELECTRICITY TRADE THROUGH POWEREX

BC Hydro's electricity trade throughout Western Canada and the Western U.S. is conducted by Powerex, our wholly owned subsidiary. Electricity trade through Powerex allows BC Hydro to return a dividend to our shareholder, and keep rates lower than they would otherwise be, by buying electricity from other jurisdictions when prices are low, and selling energy in export markets when prices are higher.

Powerex is authorized by the B.C. government and the National Energy Board to sell electricity from B.C. and other Canadian provinces in markets outside B.C. Powerex is also authorized by the U.S. Federal Energy Regulatory Commission (FERC) to buy wholesale electricity in one U.S. location to sell in another U.S. location, and to deliver electricity from B.C. directly to its U.S. wholesale customers.

In fiscal 2001 we bought more energy than we sold: 25 754 gigawatt-hours (GW·h) purchased versus 23 901 GW·h sold, for a net of 1853 GW·h purchased on the year.

Staff at Powerex and our Power Supply unit worked together to produce record electricity trade results last year. Powerex staff contributed market knowledge, and Power Supply staff optimized our electricity system to capitalize on the unique conditions in California and elsewhere that produced an unusually high demand for power in the state, and therefore high market prices for electricity. This heightened trade activity resulted in Powerex's staff being expanded from 87 to 114 employees.


POWEREX SALES INFORMATION

The volume of electricity trade with other jurisdictions continues to be subject to the uncertainties of market conditions, financial considerations, regulatory and legislative developments, and weather.

We do not anticipate last year's level of electricity trade to be repeated this year. Extraordinary events in California resulted from an unusual combination of increased energy demand, lack of new generating capacity, higher natural gas prices and lower-than-normal precipitation across western North America.

Water inflows to our reservoirs are projected to be much lower this year. Low inflows increase the need for market purchases to help support our reservoirs, and therefore reduce the amount of power available for sale to other markets. As well, an increase in the price of light-load-hour energy is expected to decrease margins on electricity trade transactions.

## REGIONAL TRANSMISSION ORGANIZATION

An increasingly dynamic business market for utilities is being created by trends towards wholesale electricity trade, retail transmission, fair trade and market power, industry consolidation and convergence, environmental expectations, technology and e-business.

BC Hydro is responding to opportunities by rethinking our business strategy and developing new business models.

Our most notable activities have involved the Regional Transmission Organization (RTO) initiative, which has significant implications for protecting and enhancing BC Hydro's electricity trade income.

RTOs are being created in response to a recent order of the U.S. FERC, which is intended to facilitate open access to wholesale transmission in order to promote electricity trade.

Participation in RTOs is voluntary. We are involved in designing the rules for RTOs in the U.S. Pacific Northwest, and are working on ways for BC Hydro to participate while respecting B.C.'s sovereignty and its legal and regulatory requirements. We are also working to ensure no unintended trade barriers are embodied in the proposal that goes before FERC to create the RTO.

# CUSTOMER VALUE

We create customer value by providing people with the best energy solutions available today. Helping our customers find quality products and services, at an affordable price, enables them to extend the efficiency and effectiveness of the electricity they buy from us. Wise use of energy and the careful spending of energy dollars move all of us closer to sustainability.

## POWER SMART

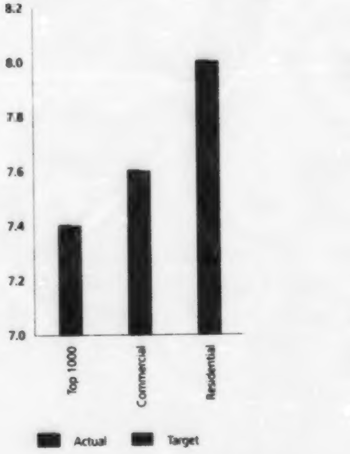
We share with our customers the responsibility for energy conservation. Encouraging people to consume less electricity, and to use energy more efficiently, reduces the immediate need to add new generating capacity to British Columbia's resource portfolio.

Our immediate challenge is to convince customers that energy conservation should be pursued for its own sake, not simply because it is beneficial to their pocketbooks. And although costly, education and information campaigns promise significant long-term results if they are able to change energy-use habits and help our society avoid unsustainable levels of power consumption.

BC Hydro has promoted wise use of electricity since the mid-1970s. In 1989, we launched our Power Smart portfolio of education, incentive and technical assistance programs. Key elements include campaigns directed at residential, commercial and industrial consumers. Power Smart has achieved an annual level of savings of about 2.5 billion kilowatt-hours (kW·h) of electricity a year, valued at $877 million.

This year an expanded Power Smart program aims to provide energy savings and lower electricity costs for customers by promoting broader awareness and education about the smart use of energy, thereby improving customer loyalty and retention. In addition, these energy savings produce environmental benefits by way of reducing GHG emissions.

CUSTOMER SATISFACTION - 2001



Customer satisfaction rating: 0 – 10 scale, 0 being least satisfied when responding to the question "How satisfied are you with BC Hydro?"

The program will help residential customers adopt energy-efficient behaviour, while commercial users will be encouraged to develop comprehensive energy-management plans that identify sites and tactics for optimum energy savings.

We estimate that this residential campaign can save up to 30 million kW·h of electricity per year, enough to power 30 000 residences and reduce our GHG emissions by 15 000 tonnes per year. Commercial savings are expected to approach 50 million kW·h per year, with associated GHG emissions reduced by 25 000 tonnes per year.

SUSTAINABILITY ACTION PLAN INITIATIVE

## POWER SMART RESIDENTIAL PROGRAM

BC Hydro's efforts to help residential consumers save electricity were refocused this year with the launch of a new, three-year campaign to provide information, education, programs and incentives.

The centrepiece of our effort is the Home Energy Learning Program – or h.e.l.p. – launched in early 2001 to provide access to a range of customized options to reduce electricity use. H.e.l.p.'s principal feature is a newly developed interactive on-line tool called the Power Smart Home Energy Profile, which generates specific energy-saving recommendations based on answers to a series of detailed questions about a participant's home and energy use. The program incorporates the customer's response to the questionnaire with their energy history from BC Hydro's database. A paper version of the questionnaire is also available for people without Internet access.

Program participants are encouraged to act on the energy-saving measures outlined in their home profile. Information about energy-efficient products is available, along with referrals to other Power Smart programs for residential customers.

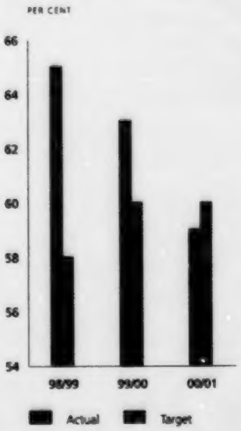
The website version of h.e.l.p. (www.bchydro.com) also includes features such as a calculator to compute energy consumption by various electrical appliances, and an Energy Library containing new material on residential energy-related topics.

Other options directed at residential customers include the development of a new home energy savings website, and a province-wide Youth Team that will promote energy-saving activities.

## IMPROVING CUSTOMER SERVICE

BC Hydro continually seeks more efficient, effective and convenient ways to meet and exceed the needs and expectations of our customers. Good service is crucial to building and retaining the customer loyalty that will sustain and grow our company, and provide the revenue streams that support action across our three bottom lines.

**PUBLIC OPINION**



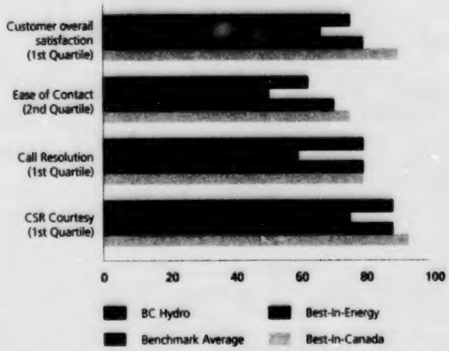
Percentage of B.C. residents who held favourable overall impressions of BC Hydro

## CALL CENTRES

Two years ago we successfully created four integrated call centres by amalgamating telephone services formerly managed from 47 locations around the province. In the process, we extended our hours of service from 7 AM to 8 PM Mondays to Fridays, and from 9 AM to 5 PM on Saturdays.

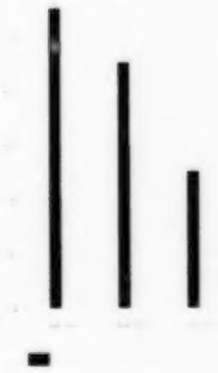
Call centre agents manage more than three million telephone enquiries each year, with queries primarily related to billing, payment arrangements and power outages. We also operate an interactive voice response system providing quick account, Power Smart and other information in six languages – English, French, Mandarin, Cantonese, Hindi and Punjabi.

Last year we introduced a feedback system, called Voice of the Customer, consisting of a semi-annual telephone survey of customers who had an exchange with our call centre, asking them to rate their satisfaction with the service they received. Results recorded last January showed 76 per cent were very satisfied, a proportion that placed us in the top quartile of similar service organizations across Canada.



CALL CENTRE: CUSTOMER ATTRIBUTES

Also introduced in our call centres last year was the Quality Assurance program, which monitors a random sampling of service calls to help us recognize excellent service and address areas for improvement.



## COMMERCIAL POWER SMART "SMART USE" INITIATIVE

BC Hydro's Power Smart program is being expanded to encourage customers in the health care and education sectors to use less energy, and to use it more efficiently.

The Commercial Power Smart "Smart Use" program delivers three initiatives:

- to pilot the implementation of specific energy-saving projects for health care and education customers;
- to employ energy audits for targeted health care and education facilities; and
- to provide a program which helps customers develop a comprehensive energy management plan for their organizations, and to identify areas for energy-efficiency improvements.

The energy-management program includes a diagnostic progress report that helps companies within the health care and education sectors rate their effectiveness at managing energy resources and costs.

-1 120

## CALL CENTRES

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## POWER SMART INDUSTRIAL PROGRAM

BC Hydro is preparing to invest in customer projects that encourage energy efficiency and develop green energy sources.

The program involves us as partners in investments that contribute to BC Hydro's environmental objectives, and especially to our commitments to limit growth of GHG emissions.

Operating as the Power Smart Industrial Program, the initiative will offer investments over the next three years for industrial-sector projects that help us achieve our target of meeting, by 2010, 10 per cent of new load growth from green energy sources.

Specific program objectives include reducing energy consumption and demand; encouraging green generation in the industrial sector to contribute towards our green energy goals; increasing the competitiveness of business customers by lowering their operating costs; and improving our financial efficiency by reducing our costs to serve customers.

Our primary target is the pulp and paper industry, where there are significant opportunities for green energy generation using woodwaste. Our secondary target is our most energy-intensive transmission customers, who have the greatest potential to implement high-impact projects.

## CUSTOMER RELATIONS

BC Hydro is developing a more customer-focused billing information system.

We are moving to manage information by customer rather than by specific accounts. Our Customer Information Systems (CIS) review project has completed research to define cross-company needs for the new system, and to identify marketplace options.

Until CIS is implemented, our existing Sales and Marketing Information (SAMI) systems will collect various account-based data from throughout the company for translation into customer-centric information. Understanding what is happening with specific customers at all touchpoints across BC Hydro is part of our Customer Relationship Management (CRM) strategy to ensure we provide one consistent face to customers, which CIS is designed to serve.

Another strategy bridging BC Hydro to CIS is a data warehouse we created to organize and store information from our billing system, and from operational systems such as SAMI. The warehouse also provides data for research and analysis.

BC Hydro also developed a new energy measurement strategy last year to improve customer service and take advantage of business opportunities. It introduced two new performance measures for reading customers' meters: Meter Reading Accuracy and Meter Reading Timeliness. Both measures help ensure customers receive a timely and accurate bill. The strategy also included initiatives related to growing our business through providing meter reading services to other utilities, and by introducing technologies to improve our meter reading efficiency.

## CUSTOMER SERVICES JOINT VENTURE

In July 2000, the Boards of Directors of BC Hydro and BC Gas agreed to pursue the creation of Servco and Retailco, two 50/50 joint venture companies aimed at providing shared customer care and retail customer services.

On December 21, 2000, BC Hydro and BC Gas announced that these two joint venture companies would not proceed. At the time the initial Memorandum of Understanding was signed, BC Hydro and BC Gas recognized that their differences created a number of issues. A more detailed review during the process revealed the issues would be more difficult to overcome than had initially been anticipated.

Although both companies were disappointed that they were unable to conclude the agreement, BC Hydro believes the concept is a good one and will continue to explore other options and partnerships that make sense for our customers and our business.

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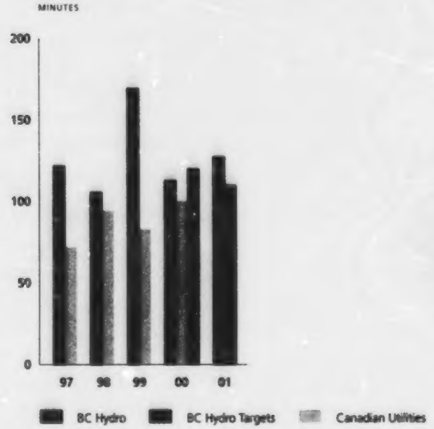
## RELIABILITY OF SERVICE

BC Hydro ensures reliability of service to our customers by using the latest in leading-edge technologies. System reliability was put to the test when wind and snowstorms hit B.C. in 2000/2001.

- On July 31, 2000, a rare lightning and windstorm in north-central B.C. disrupted service to approximately 10 000 customers. The storm raged through the Cariboo, Northwest, Prince George and Peace River areas, causing extensive damage that required around-the-clock efforts to repair and clear.
- From December 15 to 17, 2000, a severe wind and snowstorm struck the Lower Mainland and Vancouver Island, producing extensive service outages. The storm caused $1.3 million in damage to our system and left approximately 100 000 customers without power for periods of several hours to one and a half days. The storm was followed almost immediately by snow and freezing rain that tripped out service to 30 000 customers for about four hours.
- On January 16, 2001, about 10 000 customers in downtown Vancouver were affected by a failed disconnect switch at Horne Payne substation that caused five power lines and three substations to be lost to service. Service was restored within one to three hours.
- On February 28, 2001, an earthquake centered at Olympia, Washington caused gas relays at our Como Lake substation to operate, which shut down three transformers. A total station outage resulted, affecting approximately 25 000 customers for about 80 minutes.

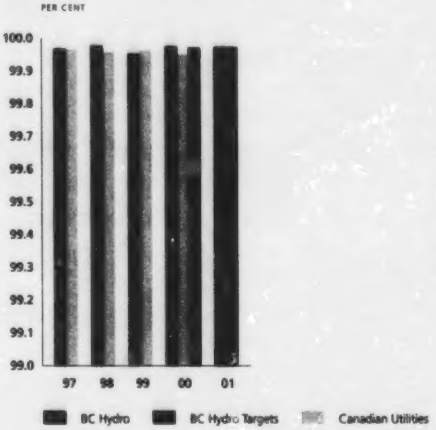
We introduced a toll-free telephone number last year for BC Hydro customers who want information during power outages. The number – 1.888.POWERON – is to be extended province-wide.

CUSTOMER AVERAGE INTERRUPTION DURATION INDEX (RELIABILITY OF SERVICE)



Canadian Utilities' data is for calendar year end, i.e., 1999 relative to 2000 for BC Hydro. Canadian Utilities' data for 1999 excludes ice storm in Quebec and Ontario. Including ice storm, CAIDI would be 508 minutes.

AVERAGE SYSTEM AVAILABILITY INDEX



Other Canadian Utilities' data is for calendar year end, i.e., 1999 relative to fiscal year 2000 for BC Hydro. Other Canadian Utilities' data for 1999 excludes ice storm in Quebec and Ontario. Including ice storm, % ASAI would be 99.6540.

# NEW BUSINESS OPPORTUNITIES

Tremendous business opportunities are arising for BC Hydro as a result of new technologies, continuing utility industry deregulation, and our desire to help customers benefit from changing market conditions. The new products and services we develop expand our growth potential and increase the economic health of BC Hydro, boosting our financial capacity to act on behalf of each of our three bottom lines.

## BUSINESS DIVERSITY

Deregulation of Canada's energy industry has prompted us to examine how we do business, both within B.C. and outside our borders, and to examine ways to protect our market base by providing additional value to customers. We are gaining new business, and protecting and building the loyalty of existing customers, by encouraging innovation and flexibility that produce more choice and better solutions in the marketplace.

## WATER AND WASTEWATER CENTRE

BC Hydro's Water and Wastewater Centre was repositioned last year to become a key source of knowledge, expertise and technologies to safeguard water quality for human use.

Opened in 1998 as a reference point to pioneer innovative processes that use electricity to treat water, the centre has since relocated to our Powertech Labs facility. It now enjoys access to eighteen laboratories to directly evaluate, test and verify technologies for application to water and wastewater treatment.

With the move to Powertech, the Water and Wastewater Centre was refocused to develop into a profitable and sustainable business that can grow into a leadership position in water treatment and testing. Long-term benefits are expected to include improved public health protection, building local communities of technological expertise, and healthy financial returns to BC Hydro.

The centre now draws on the resources of other BC Hydro divisions to provide integrated solutions to customers. The emphasis is on developing cost-effective, socially responsible and environmentally acceptable commercial technologies, including both intellectual properties and marketing rights.

Last year the centre shared an award for engineering excellence, with the City of Kamloops, for work to assess different filtration membranes used to treat water from the South Thompson River. The award from the Consulting Engineers of B.C. covered the pilot project phase of feasibility studies for a large-scale treatment plant for Kamloops.

## CUSTOM CURTAILMENT AGREEMENTS

BC Hydro and several of our larger domestic industrial customers shared benefits arising from strong export market conditions for electricity sales last year.

Through our Powerex subsidiary we offered customers an arrangement known as a Custom Curtailment Agreement (CCA), whereby they reduced their electricity demand for short periods as requested by us. The additional capacity on our end allowed us to generate energy for export sales, and the customers received a share of the revenue.

CCAs increase the ability of Powerex to trade energy in peak periods, when market prices are higher, and return the benefits to B.C. Participating in the arrangement is voluntary and does not affect domestic power supply or regular service.

Beginning in October 2000, BC Hydro and seven transmission customers agreed to eleven custom curtailments and shared $1.3 million in revenue.

## PINCH TECHNOLOGY

We received a Technology Leadership Award in 2000 for applying a pioneering process that helps large industrial customers use thermal energy more efficiently.

The tool, developed by the Electric Power Research Institute (EPRI), is called Pinch analysis. The methodology determines the minimum amount of energy required to effectively run an industrial operation, and the maximum heat-recovery potential, through a review of current use and comparison against optimum performance levels for equipment and building systems.

Pinch studies are used to evaluate and streamline existing operations, and to analyze and reduce capital requirements for new equipment and process changes.

After promoting Pinch analysis and its potential benefits to our customers, we worked with industry to complete six studies in 1999 and four studies in 2000. The work, undertaken at large pulp and paper mills, was valued at over $2.5 million and identified potential energy savings worth more than $18.5 million per year.

EPRI recognized our work to advance the process by selecting BC Hydro as its End-Use Leadership Award recipient, which recognizes efforts to promote research in field applications.

## HYDROGEN

Measures to develop hydrogen as a clean energy carrier are underway through our new business line of products and services. Leadership in this emerging, environmentally friendly industry represents the single largest domestic growth opportunity available to us.

BC Hydro is actively participating in the commercialization of hydrogen technologies for four distinct markets in B.C. – transportation, industrial supply, stationary power and portable power products.

The program has four components to enable BC Hydro to be in the best position to capture hydrogen market opportunities:

- perform technical and market research to remain abreast of developments;
- influence policy decisions related to developing hydrogen as a transportation fuel;
- undertake projects to build a profitable hydrogen business, as well as increase the likelihood that potential markets will emerge; and
- communicate our vision of hydrogen's future to the public, governments and other key stakeholders.

Over the next four years we plan to undertake several projects to affect hydrogen markets, including:

- supplying electrolytic hydrogen to industrial users in the fuel cell industry;
- displacing purchased hydrogen at our Burrard Generating Station with electrolyzed hydrogen;
- developing a high-pressure hydrogen fuelling station at Powertech Labs, in partnership with industry leaders;
- bidding to supply transit authorities with hydrogen fuelling stations for hydrogen-powered buses expected to be purchased over the next few years; and
- demonstrating the viability of stationary and portable hydrogen-powered fuel cells for reliability back-up.

The analysis suggests that significant revenues will be possible from hydrogen sales in the coming years. Developing hydrogen as an alternative transportation fuel will also reduce emissions of both GHGs and local air pollutants.

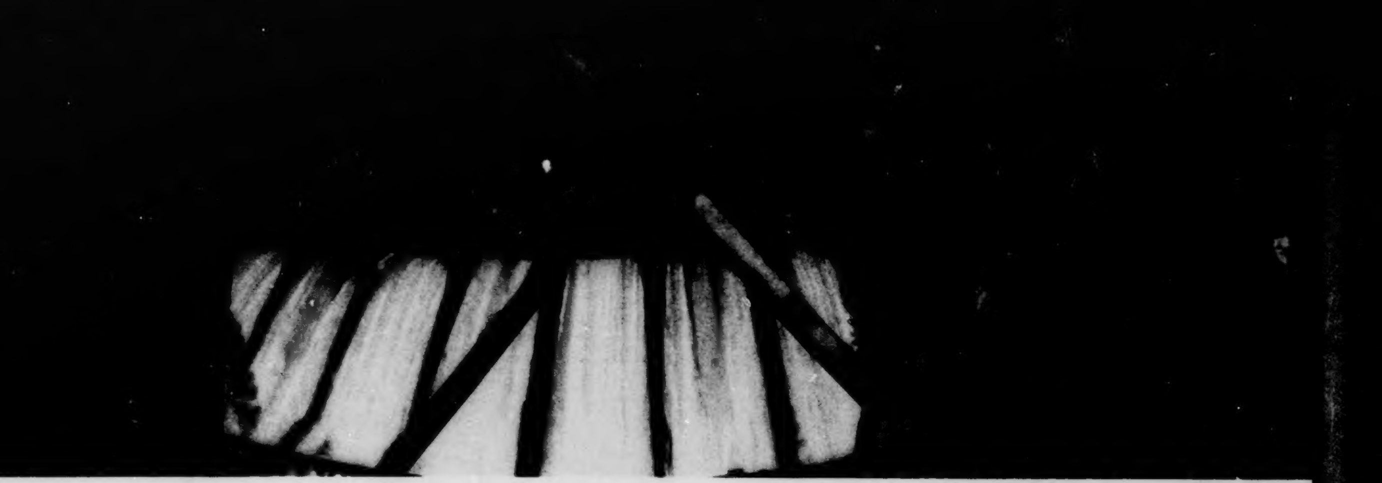
## ABORIGINAL BUSINESS PARTNERSHIP PROGRAM

Since 1999 our Aboriginal Business Partnership Program has provided grants to help support development of Aboriginal-owned ventures in B.C.

The program offers up to $15,000 to help small-business owners meet capital and operating costs involved in starting up or expanding a business. Eight firms received funding last year, including a cyber-cafe, guitar manufacturer, two eco-tourism operations and several ventures involving niche markets for forest products.

Interest in the program continues to grow. Over 100 applicants requested funding from the current program budget, almost triple the total from the previous year. Ventures outlined in this year's pool of aspirants include tourism, forestry and technical businesses.

Applications are evaluated by a six-member selection panel that includes one BC Hydro representative and five outside participants. Selection criteria include job creation, benefits to the local and B.C. economy, and fostering Aboriginal self-reliance.



## ECONOMIC DEVELOPMENT

Success for our customers means success for BC Hydro. We invest in the long-term health of the communities we serve by working in partnership with economic development authorities and other stakeholders to promote business continuity, growth and opportunities. For example, designed to spur economic development, our website provides access to a comprehensive stream of data of interest – industrial site information, economic profiles of individual communities and an inventory of local projects – to investors considering locating in British Columbia. We also work at the local level to help communities identify, seize and expand business opportunities.

BC Hydro was recognized in 2000 for our work to help develop local economies. We were one of several members of a province-wide network of community-based organizations honoured by the Community Futures Development Association of B.C. for creating economic opportunities in the province's rural communities. The award saluted a range of BC Hydro local development initiatives, including our on-line development inventory, the BusinessCARE program, scholarships for community economic developers and group mentoring programs for entrepreneurs.

## BUSINESSCARE

BusinessCARE (Community Assisted Retention and Expansion) is a locally led strategic planning program to help community leaders identify economic issues, barriers and opportunities. It encourages people to plan specific actions to help their business communities survive and thrive.

We launched BusinessCARE in 1997 in a single British Columbia community and have since expanded it to eight towns and cities across the province: Kamloops, Dawson Creek, Ladysmith, Vernon/North Okanagan, Nanaimo, Victoria, Chilliwack and Prince George.

An estimated 1400 businesses have participated in the program since its inception, including 800 in 2000. Our goal is to engage even more communities in BusinessCARE: thirty are on the waiting list to initiate the program, and we are planning to develop a modified version of the program to make it easier for communities to implement the process.

BusinessCARE involves extensive interviews with business owners and managers to identify risks to a community's economy, including issues related to finance, marketing, local government, labour market and training, and real estate. Each program effort is led by a local task force that receives training, guidance and other support from BC Hydro. Interview findings help communities identify urgent issues and appropriate solutions. Information also provides insights on a three to five year horizon that can serve long-term planning for business retention and expansion needs.

Along with expanding BusinessCARE to more communities in 2000, we initiated a modified version of the program. BusinessCARE Visitation is a shorter-term process, for communities with an economic development strategy already in place, to solve individual business problems and build a responsive, customer-focused culture.

THE POWER OF SUSTAINABILITY

[illegible]

# WANT TO RECEIVE A COPY OF BC HYDRO'S ANNUAL REPORT?

BC Hydro is committed to reporting our performance from a Triple Bottom Line perspective. We know that integrating social, environmental and economic bottom lines is fundamental to making sound, sustainable business decisions.

This report shares our approach to becoming a sustainable energy company. It provides a comprehensive overview of our performance results across the three bottom lines, and takes a look at what's ahead as we continue our journey to sustainability.

BC Hydro also produces an Annual Report to inform stakeholders of BC Hydro's financial progress and to provide a summary of our company's achievements.

If you would like to receive a copy of the report, please send an e-mail to sustainability@bchydro.com, call us at 1-877-431-9463, or visit www.bchydro.com.

# BC HYDRO
# TRIPLE
# BOTTOM LINE
# APPENDICES

SUSTAINABILITY
ACTION PLAN INITIATIVE
BENCHMARKS

PERFORMANCE MEASURES

# SUSTAINABILITY ACTION PLAN INITIATIVE BENCHMARKS

## NEW TECHNOLOGY INITIATIVES

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Green and Alternative Energy | Advance and develop new green and alternative energy projects. | Develop green energy demonstration projects.<br>Establish policy and a Triple Bottom Line screening and evaluation process for new green and alternative energy business opportunities. | Green and Alternative Energy Division established.<br>20-megawatt demonstration project for three new green technologies underway on Vancouver Island.<br>Policy items to support independent power producer(s) evaluation identified and underway. |
| Hydrogen and Fuel Cells | Actively participate in the successful commercialization of hydrogen technologies. | Monitor industry developments which are key to the success of future hydrogen sales.<br>Undertake projects aimed at increasing the likelihood that various market segments will develop and evolve in ways that enable opportunities for BC Hydro. | Five projects have been reviewed and are planned over the next four years to impact the largest potential market sectors, including industrial supply, transportation and portable products.<br>Funding has been received and projects are underway. |

## ENVIRONMENTAL INITIATIVES

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Greenhouse Gas Mitigation | Offset 50% of the increase in GHG emissions at the Island Cogeneration Project in Campbell River and the proposed Port Alberni Generation project through to 2010. | Contract 5.5 million tonnes of greenhouse gas offsets by 2005 to fulfill the objective. | Responses underway to "Request for Proposals."<br>Potential GHG Offset Projects identified and are currently at various stages of investigation and negotiation. |

## ENVIRONMENTAL INITIATIVES (CONTINUED)

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Green Energy Implementation within Power Supply | Bring to fruition independent power producer projects and joint venture development of green resources. | As a first step, hire three project evaluators, mid-2002. | Candidate search underway. |
| Environmental and Social Impact Studies within Power Supply | Assess and determine optimally eco-efficient operating models by expanding knowledge and understanding of the environmental and social impacts of power generation. | Environmental issues impacts report, fiscal 2001/02. | Project team selected.<br>Environmental and social issues reviewed and studies determined. |
| Resource Smart Advancement within Power Supply | Accelerate development of capacity and efficiency improvement projects that will result in an additional 150 gigawatt-hours using the same volume of water as is currently employed to generate electricity.<br>Incorporate impact mitigation investment into new Resource Smart projects going forward. | To be determined. | Resource Smart mandate enlarged. |
| Conduct a Life Cycle Value Assessment within Transmission & Distribution | Assess the life cycle cost of oil-filled pole top transformers versus non oil-filled pole top transformers. | Implement pilot projects and make recommendations for future action, March 2002. | |

## ENVIRONMENTAL INITIATIVES (CONTINUED)

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Integrated Vegetation Management (IVM) within Transmission & Distribution | Convert rights-of-way (ROW) from dense stands of tall-growing target species to low-growing stable plant communities with productive edge habitat.<br>Return ROW to relatively undisturbed condition and enhance biodiversity. | Select beneficial sites for ROW conversion using IVM, summer 2001.<br>Assess maintenance needs, environmental sensitivities and potential for environmental or compatible-use enhancements.<br>Consult with First Nations to understand land use needs and identify mutually beneficial maintenance solutions on BC Hydro ROW, summer 2002. | Business case developed and approved for fiscal 2001/2002, with quarterly milestones identified. |
| Continue to support Sustainable Environment Program within Transmission & Distribution | Establish long-term goals and objectives for sustainability that address current and historic impacts.<br>Contribute to the long-term sustainability of our business by reducing the impact of our transmission & distribution facilities. | Establish external advisory groups to help identify project priorities.<br>Initiate projects.<br>Devise and implement monitoring mechanisms to track the success of the initiative and public awareness and support for the program.<br>Prepare 3-year review and rationale for permanent program. | "Terms of Reference" prepared and draft program structure developed.<br>Internal resource needs approved and a "Request for Proposals" issued to assist with program implementation.<br>Proposals being generated for fast-track environmental enhancement projects. |
| Explore the use of oil-free transformers in substations | Purchase and install two oil-free transformers at the new Nicomekl substation in Surrey, B.C. | Deliver oil-free transformers to site and commence installation, July 2002.<br>Commission the complete installation, Fall 2002. | Purchased two dryformers – first in North America. |

## NEW PRODUCTS AND SERVICES

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Develop Green Export Market | Determine what is "green" in key export markets in order to meet and exceed marketplace requirements. | Report on market-by-market green energy standards, green policies and practices, green energy sales potential, resources available to Powerex, and competitors' positioning, September 2001. | Consultant retained. |
| Develop Domestic Green Energy | Conduct a pilot study on the feasibility of developing a green energy market in B.C. | Report on potential of offering domestic customers green energy initiatives and/or specific products. | Research underway. |
| Commercial Power Smart | Encourage customers in the health care and education sectors to use less energy, and to use it more efficiently. | Provide co-funding for early implementation of a performance contracting pilot.<br>Fund approximately 20 energy efficiency audits to be completed by August 2001. | School District selected to participate in the performance contracting pilot.<br>12 schools selected to participate in the audits.<br>Health care facilities reviewed for most appropriate candidates. |
| Power Smart Industrial Program | Help customers optimize their investment return on energy efficiency and green energy generation projects and move those projects forward to fruition.<br>Provide Power Smart solutions that help our customers use energy more efficiently and pursue smart ways of creating energy. | Gain 440 gigawatt-hours in energy savings by customers who participate in the program.<br>Gain 40 megawatts in capacity savings. | Project applications being reviewed. |

## NEW PRODUCTS AND SERVICES (CONTINUED)

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Residential Power Smart | Increase residential customer satisfaction through real energy savings estimated at 35 gigawatt-hours annually, and customer savings of $2.1 million.<br>Improve public perception, public support and consent to operate.<br>Create a stronger link between individual energy savings and the environmental benefits that result from wise use of power. | Launch and promote a new Power Smart website with an on-line energy profile, energy library, energy calculator and tips on the smart use of energy.<br>Promote a hard copy version for customers without Web access, and process manually for customers.<br>Register 14,000 customers for the home energy profile in the program's first 12 months. | Website operational.<br>Eight-week media and outdoor billboard campaign conducted.<br>Participated in two major home shows.<br>Power Smart Youth Teams trained in promoting smart use of energy at events province-wide.<br>Number of users registered on the Web topped 10,500 within first few months. |

## SOCIAL INITIATIVES

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Corporate Social Responsibility | Research and identify aspects of our business that contribute to the social bottom line. | Engage in stakeholder consultation to help develop social benchmarks.<br>Link benchmarks to financial and non-financial value across the organization.<br>Develop TBL reporting framework and measure. | Project team selected. |

## EMPLOYEE INITIATIVES

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| Employee Involvement in Sustainability | Support and expand the creative energy, capability and commitment of employees that will enable BC Hydro to become a sustainable energy company. | Determine baseline levels of employee awareness, understanding and engagement of sustainability.<br>Identify the need and develop targets and measures.<br>Develop tools to support the development of ideas by employees. | Project plan prepared.<br>Baseline survey prepared.<br>Sustainability website development underway. |

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## PLANNING AND CONSULTATION

| SAP INITIATIVE | OBJECTIVE(S) | KEY MILESTONE(S) | ACTION(S) TO DATE |
|---|---|---|---|
| 2002 Electricity Plan | Develop a preferred set of energy options to meet our customers' needs for electricity beyond 2006.<br>Support BC Hydro's strategic objective to maintain public consent to operate by involving interested parties in exploring electricity supply choices and associated tradeoffs such as cost of supply. | Report on preferred energy options to meet long-term electricity needs, incorporating broadly based public consultation. | Project plan developed.<br>Consultative plan designed with input gathered from key individuals.<br>Public values collection preparation.<br>Demand/Supply balance analyzed.<br>Possible resource options scoped. |

# PERFORMANCE MEASURES

## SOCIAL INDICATORS

### 1. BC HYDRO'S WORKFORCE PROFILE COMPARED TO B.C. LABOUR FORCE

| DEMOGRAPHIC PROFILE BY PER CENT | BC HYDRO | B.C. LABOUR FORCE |
|---|---|---|
| Under 20 (Echo) | 1 | 6 |
| 20 – 34 (Post Boomers) | 16 | 34 |
| 35 – 44 (Boomers) | 24 | 28 |
| 45 – 53 (Boomers) | 36 | 23 |
| 54 – 60 (WWII) | 18 | 6 |
| 60+ (Depression Babies) | 5 | 4 |

BC Hydro shares the demographic profile common to many organizations in B.C., to a greater degree than most: BC Hydro's workforce is older, the baby boom generation is more dominant, the retirement bulge will come earlier and the cumulative effect of retirement will be greater. Source: PAHR May 2000, 1999 Strategic Projections Inc.

### 2. DIVERSITY OF WORKFORCE

| PER CENT | BC HYDRO | B.C. POPULATION | B.C. TOTAL WORKFORCE |
|---|---|---|---|
| Women | 33 | 51 | 47 |
| Visible Minorities | 13 | 18 | 16 |
| Aboriginal People | 2 | 4 | 3 |
| People with Disabilities | 4 | 8 | 7 |

### 3. TRENDS IN REPRESENTATION OF FOUR GROUPS TRACKED IN SENIOR AND UPPER LEVEL POSITIONS

| PER CENT | MAY 1996 | SEPTEMBER 2000 |
|---|---|---|
| Women | 15 | 20 |
| Visible Minorities | 16 | 17 |
| Aboriginal People | 1 | 1 |
| People with Disabilities | 4 | 3 |

### 4. AVERAGE SALARY OF THE DESIGNATED GROUP AS A PERCENTAGE OF THE AVERAGE SALARY OF THE NON-DESIGNATED GROUP

| REGULAR EMPLOYEES PER CENT | MAY 1996 | SEPTEMBER 2000 | TEMPORARY EMPLOYEES PER CENT | MAY 1996 | SEPTEMBER 2000 |
|---|---|---|---|---|---|
| Women | 76 | 81 | Women | 72 | 78 |
| Visible Minorities | 104 | 102 | Visible Minorities | 92 | 90 |
| Aboriginal People | 94 | 93 | Aboriginal People | 92 | 101 |
| People with Disabilities | 98 | 98 | People with Disabilities | 101 | 94 |

### 5. PROPORTIONS OF YOUTH HIRED AMONG TOTAL, BY GROUPS TRACKED

| FISCAL YEAR PER CENT | 1998/1999 | 1999/2000 |
|---|---|---|
| Women | 51 | 44 |
| Visible Minorities | 16 | 19 |
| Aboriginal People | 2 | 1 |
| People with Disabilities | 1 | 1 |

## 6. HARASSMENT COMPLAINTS

| FISCAL YEAR 1999/2000 | NUMBER |
|---|---|
| Total cases | 48 |
| TYPE OF COMPLAINT | |
| Personal | 27 |
| Discrimination | 5 |
| Sexual | 1 |
| Other | 15 |

## 7. RESOLUTION OF HARASSMENT COMPLAINTS

| FISCAL YEAR 1999/2000 | NUMBER |
|---|---|
| Consulting | 16 |
| Informal | 30 |
| Formal | 0 |
| Other | 2 |

Consulting: Employee consults with Respectful Workplace Advisor, and receives support and coaching.
Informal: Respectful Workplace Advisor mediates or facilitates resolution between the parties.
Formal: Review Officer conducts a formal investigation and reports to the Vice President of Human Resources.

## 8. GRIEVANCE TRENDS AMONG UNIONIZED WORKFORCE

| NUMBER | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|
| IBEW Grievances | 26 | 32 | 30 | 49 | 33 |
| OPEIU Grievances | 62 | 40 | 25 | 30 | 48 |
| IBEW Arbitrations | 1 | 3 | 1 | 2 | 3 |
| OPEIU Arbitrations | 6 | 3 | 2 | 3 | 3 |

IBEW: International Brotherhood of Electrical Workers OPEIU: Office and Professional Employees International Union

## 9. FREQUENCY OF DISABLING INJURIES AND MEDICAL INJURIES (MAY OR MAY NOT RESULT IN TIME LOST FROM WORK)

| YEAR | FREQUENCY RATE BC HYDRO | FREQUENCY RATE CANADIAN UTILITIES |
|---|---|---|
| 1997 | 5.59 | 5.51 |
| 1998 | 6.31 | 4.47 |
| 1999 | 5.25 | 4.41 |
| 2000 | 4.87 | n/a |

BC Hydro's combined injury rate was relatively steady through history, before declining in recent years to become essentially comparable with the composite average for Canadian utilities. In comparison to utilities of similar size and configuration, however, BC Hydro has consistently maintained a lower rate of accident frequency.

SOCIAL INDICATORS (CONTINUED)

## 10. PUBLIC FATALITIES

| FISCAL YEAR | NUMBER |
|---|---|
| 1997/1998 | 5 |
| 1998/1999 | 2 |
| 1999/2000 | 1 |
| 2000/2001 | 0 |
| **TARGET** | **0** |

BC Hydro has no control over public fatalities; however, when numbers increase, we increase safety advertising.

## 11. PUBLIC ACCIDENTS INVOLVING BC HYDRO FACILITIES, EXCLUDING MOTOR VEHICLE ACCIDENTS

| FISCAL YEAR | NUMBER |
|---|---|
| 1997/1998 | 1284 |
| 1998/1999 | 1278 |
| 1999/2000 | 1046 |

## 12. AWARENESS OF ELECTRICAL SAFETY AMONG MALES AGED 18-35 WHO WORK WITH OR CLOSE TO ELECTRICITY (UNAIDED)

| CRITICAL TARGET AUDIENCE: MEN AGED 18 – 35 YEARS | PER CENT |
|---|---|
| No, not aware | 52 |
| Yes, aware | 48 |

Data Source: McIntyre & Mustel Research.

## 13. VISITORS TO BC HYDRO RECREATION SITES

| YEAR | NUMBER |
|---|---|
| 1996 | 1 087 470 |
| 1997 | 1 103 114 |
| 1998 | 1 426 711 |
| 1999 | 1 269 715 |
| 2000 | 1 243 172 |

The 1998 bulge is attributed to exceptionally hot conditions throughout B.C. that summer.

## 14. CORPORATE/REGIONAL DONATION

| | PER CENT |
|---|---|
| Arts and Culture | 22 |
| Education | 20 |
| Environment | 9 |
| United Way | 9 |
| Aboriginal | 13 |
| Regional | 10 |
| Scholarships | 11 |
| Employee Sponsored HYDRECS | 3 |
| Community Investment | 3 |

BC Hydro provided $3 million to over 500 non-profit organizations in B.C.

# PERFORMANCE MEASURES

## ENVIRONMENTAL INDICATORS

### 15. DIVERSION RATE OF TOTAL WASTE

| FISCAL YEAR | 1997/1998 | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|---|
| Percentage | 38 | 48 | 53 | 63 |

BC Hydro surpassed the provincial government's mandated target of 50 per cent by the end of 2000.

### 16. WASTE SHIPPED TO LANDFILL

| FISCAL YEAR | 1997/1998 | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|---|
| Tonnes | 2590 | 2181 | 1954 | 1537 |

### 17. SUMMARY OF RECYCLING EFFORTS

| ITEM FISCAL YEAR | 1996/1997 | 1997/1998 | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|---|---|
| Paper (tonnes) | 320 | 335 | 330 | 408 | 354 |
| Cardboard (tonnes) | 65 | 54 | 56 | 64 | 68 |
| Scrap Metal (tonnes) | 1441 | 1352 | 1470 | 1370 | 1370 |
| Wood Poles (number) | 5000 | 4000 | 4000 | 4200 | 4062 |
| Wood Poles (tonnes) | 378 | 302.4 | 302.4 | 317.52 | 307.09 |
| Toner Cartridges (number) | 600 | 740 | 604 | 679 | 975 |
| Toner Cartridges (tonnes) | 0.3 | 0.37 | 0.3 | 0.34 | 0.49 |
| Fluorescent Tubes (number) | 4801 | 12 297 | 8360 | 13 100 | 13 281 |
| Fluorescent Tubes (tonnes) | 1.2 | 3.07 | 2.09 | 3.27 | 3.32 |
| Dry Cell Batteries (tonnes) | n/a | n/a | n/a | n/a | 1.4 |
| Ceramic Insulators (tonnes) | 120 | 76 | 135 | 154 | 500 |
| Organic Waste (tonnes) | n/a | n/a | n/a | 6 | 32.6 |
| Total Waste Recycled (tonnes) | 2325.5 | 2122.84 | 2295.79 | 2323.13 | 2636.9 |

We also recycled 7.16 tonnes of batteries and donated 953 used computers to schools, and will include both measures in next year's total.

### 18. PERCENTAGE OF INSULATING OIL REUSED

| YEAR | 1999 | 2000 |
|---|---|---|
| BC Hydro | 72.5 | 81.5 |
| Other Canadian Utilities | 69.64 | 77.31 |

This indicator provides a measure of the extent to which BC Hydro and other utilities reduce consumption and purchases of new insulating oil by reusing existing inventories of insulating oil that may have otherwise been disposed of as waste or recycled for another purpose.

### 19. TOTAL VOLUME OF PETROLEUM AND OIL SPILLED AND NUMBER OF LEGALLY REPORTABLE SPILL INCIDENTS

| FISCAL YEAR | NUMBER OF INCIDENTS | TOTAL VOLUME |
|---|---|---|
| 1996/1997 | 56 | 12 441 |
| 1997/1998 | 38 | 932 |
| 1998/1999 | 37 | 5 323 |
| 1999/2000 | 36 | 13 150 |
| 2000/2001 | 34 | 11 714 |

Environmental incident system records all types of incidents, including those caused by motor vehicle accidents, weather, equipment failure and human error. Not all incidents recorded in this system are under the direct control of BC Hydro. Volume of oil and petroleum spills are field estimates only.

### 20. LAST YEAR'S PCB ACTIVITY

| FISCAL YEAR 2000/2001 | TONNES |
|---|---|
| High Level in storage | 0 |
| Low Level in storage | 184 |
| High Level sent for destruction | 641 |
| Low Level sent for destruction | 131 |

"High Level PCB Material" is any material with a PCB concentration of greater than 1% (10,000 ppm)

"Low Level PCB Material" is any material with a PCB concentration of greater than 0.005% but less than 1% (greater than 50 ppm but less than 10,000 ppm).

### 21. HIGH LEVEL PCBS DESTROYED AND REMAINING IN SERVICE OR STORAGE

| FISCAL YEAR | CUMULATIVE TONNES | TONNES REMAINING | % REMAINING | % DESTROYED |
|---|---|---|---|---|
| 1992/1993 | 0 | 3617 | 100.00 | 0.00 |
| 1993/1994 | 0 | 3617 | 100.00 | 0.00 |
| 1994/1995 | 85 | 3532 | 97.65 | 2.35 |
| 1995/1996 | 177 | 3440 | 95.11 | 4.89 |
| 1996/1997 | 652 | 2965 | 81.97 | 18.03 |
| 1997/1998 | 1320 | 2297 | 63.51 | 36.49 |
| 1998/1999 | 2317 | 1300 | 35.94 | 64.06 |
| 1999/2000 | 2317 | 1300 | 35.94 | 64.06 |
| January 2000/2001 | 2906 | 711 | 19.65 | 80.35 |

This does not include the approximately 5400 tonnes of Low Level PCB-contaminated soil stored at our Rock Bay facility, Victoria, B.C. This material is the result of historic contamination on surplus property that BC Hydro has committed to clean up. It was excavated in 1993 and is scheduled for destruction in July 2001.

### 22. BC HYDRO'S SYSTEM POWER SUPPLY INCLUDING ELECTRICITY PURCHASES FROM INDEPENDENT POWER PROVIDERS

| YEAR 2000 | PER CENT |
|---|---|
| Natural Gas | 8.0 |
| Hydroelectric | 90.9 |
| Woodwaste | 1.0 |
| Diesel | 0.1 |
| Total: | 100.0 |

## 23. TOTAL GREENHOUSE GAS EMISSIONS FROM BC HYDRO'S SYSTEM

| | | ACTUAL | | | | | | | | | | | | FORECAST | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| EMISSIONS IF NO ACTION TAKEN | | | | | | | | | | | | | | | | | | |
| BC Hydro facilities (direct) | | 2 732 | 1 733 | 1 814 | 2 505 | 4 005 | 3 997 | 3 989 | 3 143 | 3 970 | 3 997 | 4 068 | 4 153 | 4 399 | 4 351 | 4 105 | 4 105 | 4 105 |
| Power purchases from non-BC Hydro facilities (indirect) | | 0 | 0 | 8 | 84 | 225 | 924 | 1 709 | 411 | 432 | 947 | 375 | 912 | 2 742 | 2 862 | 2 919 | 2 739 | 4 033 |
| TOTAL EMISSIONS IF NO ACTION TAKEN | A | 2 732 | 1 733 | 1 821 | 2 589 | 4 230 | 4 921 | 5 697 | 3 554 | 4 402 | 4 944 | 4 443 | 5 065 | 7 141 | 7 213 | 7 023 | 6 844 | 8 138 |
| Internal Emission Reductions | | | | | | | | | | | | | | | | | | |
| Customer efficiencies (Power Smart) | | 34 | 118 | 316 | 514 | 727 | 902 | 1 034 | 1 193 | 1 297 | 1 246 | 1 226 | 1 200 | 1 080 | 972 | 875 | 787 | 708 |
| Internal efficiencies (Resource Smart, Burrard, SF6) | | 11 | 115 | 149 | 172 | 186 | 208 | 238 | 262 | 267 | 302 | 344 | 352 | 394 | 487 | 550 | 773 | 801 |
| Purchase/development of low GHG intensity power | | 203 | 587 | 752 | 763 | 1 098 | 1 552 | 1 640 | 1 245 | 1 570 | 1 369 | 1 485 | 1 237 | 1 386 | 1 489 | 1 866 | 1 962 | 2 104 |
| TOTAL INTERNAL EMISSION REDUCTIONS | B | 248 | 820 | 1 217 | 1 449 | 2 011 | 2 661 | 2 912 | 2 700 | 3 134 | 2 917 | 3 055 | 2 789 | 2 860 | 2 948 | 3 291 | 3 523 | 3 613 |
| CUMULATIVE INTERNAL EMISSION REDUCTIONS | | 248 | 1 067 | 2 284 | 3 733 | 5 744 | 8 405 | 11 317 | 14 017 | 17 151 | 20 067 | 23 123 | 25 912 | 28 771 | 31 720 | 35 010 | 38 533 | 42 147 |
| ACTUAL EMISSIONS | | | | | | | | | | | | | | | | | | |
| BC Hydro facilities (direct) | | 2 484 | 914 | 596 | 1 056 | 2 073 | 1 900 | 2 398 | 443 | 842 | 1 634 | 1 058 | 1 995 | 3 447 | 3 307 | 2 725 | 2 313 | 2 791 |
| Power purchases from non-BC Hydro facilities (indirect) | | 0 | 0 | 8 | 84 | 146 | 360 | 387 | 411 | 426 | 393 | 329 | 282 | 835 | 957 | 1 007 | 1 007 | 1 733 |
| TOTAL ACTUAL EMISSIONS | C = A-B | 2 484 | 914 | 604 | 1 140 | 2 219 | 2 260 | 2 785 | 854 | 1 268 | 2 027 | 1 387 | 2 276 | 4 282 | 4 264 | 3 733 | 3 321 | 4 524 |
| ACTUAL GHG INTENSITY (T/GW h) | | 55 | 19 | 12 | 22 | 47 | 46 | 61 | 15 | 23 | 37 | 26 | 42 | 76 | 73 | 65 | 58 | 74 |
| ACTUAL EMISSIONS IN REPRESENTATIVE BASE YEAR (1989/1993 AVERAGE) | | | | 1 472 | | | | | | | | | | | | | | |
| PURCHASED OFFSETS | D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 50 | 150 | 300 | 600 |
| NET EMISSIONS AFTER OFFSETS | E = C-D | 2 484 | 914 | 604 | 1 140 | 2 219 | 2 260 | 2 785 | 854 | 1 268 | 2 027 | 1 387 | 2 274 | 4 280 | 4 214 | 3 583 | 3 021 | 3 924 |
| NET GHG INTENSITY (T/GW h) | | 55 | 19 | 12 | 22 | 47 | 46 | 61 | 15 | 23 | 37 | 26 | 42 | 76 | 72 | 62 | 53 | 64 |

All amounts shown in thousands (000's) of tonnes of carbon dioxide equivalent (kt $CO_2e$) unless otherwise indicated. Bars represent actual emission for years 1989 through 2000 and projected from 2001 onward. Considerable year-to-year variability reflects changes in water availability and fossil fuel generation. The line above the bars represents the level of emissions we would have reached if no action was taken to reduce our emissions. (See graph on page 49.)

## 24. GHG INTENSITY COMPARISONS

| | $TCO_2E$/GW h |
|---|---|
| U.S. Utilities (average) | 610 |
| Canadian Utilities (average) | 230 |
| BC Hydro | 42 |

The intensity of GHG emissions from BC Hydro's power is low when compared to other utilities.

## 25. GHG EMISSIONS REDUCTIONS SOURCES

| YEAR 2000 | PER CENT |
|---|---|
| Customer Efficiencies (Power Smart) | 43 |
| Internal Efficiencies (Resource Smart, Burrard Generating Station) | 13 |
| Purchase/Development of Cleaner Power | 44 |

In 2000, most of our emissions reductions came from purchasing cleaner power from independent power producers, and from helping our customers save energy through our Power Smart programs. We achieved the remainder of our emissions reductions by improving the efficiency of our facilities.

## ENVIRONMENTAL INDICATORS (CONTINUED)

### 26. RESOURCE SMART ENERGY GAINS

| FISCAL YEAR | RESTORED ENERGY | CUMULATIVE RESTORED ENERGY | NEW ENERGY | CUMULATIVE NEW ENERGY | TOTAL CUMULATIVE ENERGY GAINS (GW·h/a) |
|---|---|---|---|---|---|
| 1995/1996 | 0 | 595 | 46 | 403 | 998 |
| 1996/1997 | 0 | 595 | 46 | 449 | 1044 |
| 1997/1998 | 25 | 620 | 0 | 449 | 1069 |
| 1998/1999 | 0 | 620 | 52 | 501 | 1121 |
| 1999/2000 | 288 | 908 | 77 | 578 | 1486 |

Restored energy: Over time, generating facilities lose some of their capability. The Resource Smart program helps restore facilities to their original capabilities.
New energy: New energy is energy over and above a facility's original capability.

### 27. INTERNAL ENERGY EFFICIENCY

| FOR GENERATION | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| Gross Generation (GW·h) | 50 774 | 51 077 | 50 207 | 51 498 |
| Net Generation (GW·h) | 50 612 | 50 874 | 50 034 | 51 266 |
| Generation Energy Efficiency (per cent) | 99.7 | 99.6 | 99.7 | 99.6 |

| CANADIAN UTILITIES - FOR GENERATION | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| Generation Energy Efficiency (per cent) | 97.4 | 97 | 97.3 | 97.4 |

| FOR TRANSMISSION AND DISTRIBUTION | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| Transmission and Distribution System Energy Input (GW·h) | 58 130.00 | 58 559.00 | 57 526.00 | 60 425.00 |
| Transmission and Distribution System Energy Output (GW·h) | 54 441.00 | 53 978.00 | 54 023.00 | 58 267.00 |
| Transmission and Distribution Energy Efficiency (per cent) | 93.7 | 92.2 | 93.9 | 96.4 |

## 28. LOCAL AIR QUALITY INDICATORS

| EMISSIONS OF SULFUR DIOXIDE | 1997 | 1998 | 1998 | 2000 |
|---|---|---|---|---|
| Total Gross Annual $SO_2$ Emissions (tonnes) | 40 | 75 | 50 | 61 |
| Mass Gross $SO_2$ Emitted Per Unit of Net Fossil Generation (g/kW·h) | 0.028 | 0.028 | 0.028 | 0.02 |
| Mass Gross $SO_2$ Emitted Per Unit of Net System Generation (g/kW·h) | 0.0008 | 0.0015 | 0.0009 | 0.001 |

| EMISSIONS OF SULFUR DIOXIDE FROM CANADIAN UTILITIES | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| Total Gross Annual $SO_2$ Emissions (tonnes) | 501 841.00 | 628 128.00 | 598 133.00 | 621 791.00 |
| Mass Gross $SO_2$ Emitted Per Unit of Net Fossil Generation (g/kW·h) | 5.22 | 5.14 | 5.06 | 4.86 |
| Mass Gross $SO_2$ Emitted Per Unit of Net System Generation (g/kW·h) | 1.05 | 1.3 | 1.21 | 1.21 |

BC Hydro emits small quantities of $SO_2$ compared to the Canadian average because our primary fossil fuel source for thermal generation is natural gas, which is low in $SO_2$ emissions.

| EMISSIONS OF $NO_x$ | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| Total Gross Annual $NO_x$ Emissions (tonnes) | 638 | 1213 | 801 | 1048 |
| Mass Gross $NO_x$ Emitted Per Unit of Net Fossil Generation (g/kW·h) | 0.45 | 0.45 | 0.45 | 0.34 |
| Mass Gross $NO_x$ Emitted Per Unit of Net System Generation (g/kW·h) | 0.013 | 0.024 | 0.016 | 0.02 |

| EMISSIONS OF $NO_x$ FROM CANADIAN UTILITIES | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| Total Gross Annual $NO_x$ Emissions (tonnes) | 203 047.00 | 246 935.00 | 234 324.00 | 232 273.00 |
| Mass Gross $NO_x$ Emitted Per Unit of Net Fossil Generation (g/kW·h) | 2.11 | 2.02 | 1.98 | 1.82 |
| Mass Gross $NO_x$ Emitted Per Unit of Net System Generation (g/kW·h) | 0.42 | 0.51 | 0.48 | 0.45 |

Since 1993 we have voluntarily upgraded and modernized the equipment at Burrard Generating Station, our natural gas-fired facility near Vancouver and BC Hydro's principal source of thermal power. In May 2000 we completed installation of selective catalytic reduction (SCR) technology installation on all six power generating units. This marked the first time in Canada that SCR technology was installed on utility boilers. The project achieved a 90 per cent reduction in emissions of nitrogen oxide ($NO_x$) from the plant.

# PERFORMANCE MEASURES

## ECONOMIC INDICATORS

### 29. SHAREHOLDER VALUE-ADDED (SVA)

| FISCAL YEAR | MILLIONS OF DOLLARS |
|---|---|
| 2000/2001 Actual | 103 |
| 2000/2001 Target | (55) |
| 1999/2000 Actual | 129 |

SVA is net income before finance charges and the transfer to the Rate Stabilization Account, minus Capital Charge (invested capital multiplied by cost of capital) and measures how well BC Hydro performed beyond the return expected for a company with a similar level of risk. It is calculated as: Net Operating Profit less Capital Charge. Net Operating Profit is net income before finance charges and the transfer to the Rate Stabilization Account. Capital Charge is Invested Capital x Cost of Capital. In fiscal 2001, the SVA result of $103 million was well above target. SVA before the Customer Profit Sharing was $412 million, $467 million higher than target and $283 million higher than the prior year. The substantial increase in SVA from Target and Prior Year is primarily attributed to the increase in electricity trade margins. Optimizing the use of storage and generation facilities to maximize profitable import and export of energy allowed BC Hydro to take advantage of significant opportunities created by a strong electricity trade market and high electricity trade sales prices. High prices were mainly due to several factors relating to the Californian market and its restructuring problems.

### 30. PROPORTION OF REVENUE FROM CUSTOMER GROUPS

| YEAR PER CENT | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| Residential | 35.70 | 32.85 | 28.10 | 25.69 | 11.31 |
| Light Industrial & Commercial | 33.35 | 32.42 | 27.54 | 24.40 | 10.98 |
| Large Industrial | 19.41 | 16.60 | 16.04 | 13.85 | 6.64 |
| Other & Miscellaneous | 4.78 | 4.78 | 4.04 | 3.62 | 1.89 |
| Electricity Trade | 6.76 | 13.35 | 24.29 | 32.44 | 69.18 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

### 31. REVENUE ALLOCATION

| YEAR PER CENT | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| Energy costs | 20.94 | 23.45 | 34.77 | 38.33 | 65.43 |
| OMA | 18.10 | 16.09 | 14.56 | 13.65 | 9.57 |
| Taxes | 6.97 | 6.93 | 5.69 | 4.94 | 2.21 |
| Depreciation | 13.48 | 13.39 | 11.40 | 10.78 | 4.82 |
| Finance Charges | 25.76 | 22.91 | 20.21 | 16.64 | 7.09 |
| Payment to the Province | 11.50 | 14.33 | 10.71 | 9.86 | 4.72 |
| Restructuring Costs | 0.78 | 0.00 | 0.00 | 0.00 | 0.00 |
| Customer Profit Sharing | 0.00 | 1.25 | 0.00 | 0.00 | 3.93 |
| ETO costs | 0.00 | 0.00 | 0.39 | 0.00 | 0.00 |
| RSA | 0.00 | 0.00 | 0.00 | 3.71 | 1.31 |
| Retained Earnings | 2.47 | 1.64 | 2.27 | 2.10 | 0.94 |
|  | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

## 32. ELECTRICITY TRADE MARKET PRICES

| MONTHLY RATES IN U.S. $ PER MW·h | MID-COLUMBIA ON-PEAK PRICES | BC HYDRO INDUSTRIAL ELECTRICITY RATE |
|---|---:|---:|
| June 1998 | 3.80 | 17.00 |
| July 1998 | 26.32 | 17.00 |
| August 1998 | 51.04 | 17.00 |
| September 1998 | 39.87 | 17.00 |
| October 1998 | 30.48 | 17.00 |
| November 1998 | 28.52 | 17.00 |
| December 1998 | 31.19 | 17.00 |
| January 1999 | 17.95 | 17.00 |
| February 1999 | 18.26 | 17.00 |
| March 1999 | 16.39 | 17.00 |
| April 1999 | 24.06 | 17.00 |
| May 1999 | 28.25 | 17.00 |
| June 1999 | 23.73 | 17.00 |
| July 1999 | 24.72 | 17.00 |
| August 1999 | 29.84 | 17.00 |
| September 1999 | 32.11 | 17.00 |
| October 1999 | 45.13 | 17.00 |
| November 1999 | 32.19 | 17.00 |
| December 1999 | 26.33 | 17.00 |
| January 2000 | 27.38 | 17.00 |
| February 2000 | 26.86 | 17.00 |
| March 2000 | 27.79 | 17.00 |
| April 2000 | 27.87 | 17.00 |
| May 2000 | 59.80 | 17.00 |
| June 2000 | 181.43 | 17.00 |
| July 2000 | 122.25 | 17.00 |
| August 2000 | 213.44 | 17.00 |
| September 2000 | 134.80 | 17.00 |
| October 2000 | 103.69 | 17.00 |
| November 2000 | 171.98 | 17.00 |
| December 2000 | 554.38 | 17.00 |
| January 2001 | 278.30 | 17.00 |
| February 2001 | 287.37 | 17.00 |
| March 2001 | 276.62 | 17.00 |

Electricity trade market prices that are relevant to BC Hydro are strongly influenced by market conditions in the Pacific Northwest and in California, where the majority of BC Hydro's electricity trade transactions occur. Market prices at the Mid-Columbia trading hub in central Washington State are indicative of the prices in the Pacific Northwest. As can be seen, market prices have been extremely volatile over the last several years and are significantly above BC Hydro's domestic tariff prices.

## 33. POWEREX SALES ACTIVITY

|  | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---:|---:|---:|---:|---:|
| Canadian $ (millions) | 164 | 341 | 739 | 1,129 | 5,458 |
| GW·h | 9 826 | 13 168 | 18 715 | 23 410 | 23 900 |

## ECONOMIC INDICATORS (CONTINUED)

### 34. ELECTRICAL ENERGY DELIVERIES

| FISCAL YEAR BY PERCENTAGE | BC HYDRO | ENERGY-DELIVERED GROWTH RATE CANADIAN UTILITIES |
|---|---|---|
| 1995/1996 | –3.48 | 3.41 |
| 1996/1997 | 20.27 | 3.05 |
| 1997/1998 | 1.72 | –1.29 |
| 1998/1999 | 14.61 | 7.50 |
| 1999/2000 | 9.36 | 5.16 |

Percentage change in electrical energy deliveries for the combined Canadian and export markets, including all sales to industrial, commercial, residential and farm, street and area lighting customers, and non-service customers such as other utilities. Internal sales and energy wheeling are excluded.

### 35. CUSTOMER AVERAGE INTERRUPTION DURATION INDEX

| FISCAL YEAR FOR | 1996/1997 | 1997/1998 | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|---|---|
| BC Hydro | 121.8 | 105.6 | 169.2 | 112.8 | 127.2 |
| BC Hydro Targets | na | n/a | n/a | 120 | 109.8 |
| Canadian Utilities* | 72 | 94.2 | 82.8 | 100.2 | n/a |

* Canadian Utilities' data is for calendar year end, i.e., 1999 relative to fiscal year 2000 for BC Hydro. Canadian Utilities' data for 1999 excludes the ice storm in Quebec and Ontario. Including the ice storm, Customer Average Interruption Duration Index (CAIDI) would be 508 minutes.

### 36. PERCENTAGE OF TIME POWER IS AVAILABLE TO BC HYDRO CUSTOMERS

| FISCAL YEAR FOR | 1996/1997 | 1997/1998 | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|---|---|
| BC Hydro | 99.9669 | 99.9772 | 99.9518 | 99.974 | 99.972 |
| BC Hydro Targets | n/a | n/a | n/a | 99.97 | 99.972 |
| Canadian Utilities* | 99.9673 | 99.9578 | 99.9621 | 99.9508 | n/a |

* Canadian Utilities' data is for calendar year end, i.e., 1999 relative to fiscal year 2000 for BC Hydro. Canadian Utilities' data for 1999 excludes the ice storm in Quebec and Ontario. Including the ice storm, % Average System Availability Index (ASAI) would be 99.6540.

### 37. METER READING TIMELINESS AND ACCURACY

| METERS READ ON SCHEDULE | PER CENT |
|---|---|
| 2000/2001 Actual | 93 |
| 2000/2001 Target | 91 |
| 2001/2002 Target | 94 |

| METER READING ACCURACY | PER CENT |
|---|---|
| 2000/2001 Actual | 99.92 |
| 2000/2001 Target | 99.50 |
| 2001/2002 Target | 99.70 |

## 38. TAXES PER UNIT OF ENERGY DELIVERED

| YEAR | BC HYDRO | TAXES UNIT COST ($/GW h) CANADIAN UTILITIES |
|---|---|---|
| 1995/1996 | 9.00 | 6.25 |
| 1996/1997 | 8.51 | 6.12 |
| 1997/1998 | 8.24 | 5.51 |
| 1998/1999 | 6.92 | 4.42 |
| 1999/2000 | 6.42 | 4.11 |

## 39. COMPARATIVE INDEX OF ELECTRICITY PRICES

| CITY | RESIDENTIAL CUSTOMERS (CONSUMPTION 1000 kW h/MONTH) | MEDIUM POWER CUSTOMERS (CONSUMPTION 100 000 kW h/MONTH POWER 500 kW) | LARGE POWER CUSTOMERS (CONSUMPTION 3 060 000 kW h/MO POWER 5000 kW VOLTAGE 25kV) |
|---|---|---|---|
| Winnipeg | 98 | 72 | 80 |
| Montreal | 100 | 100 | 100 |
| Vancouver | 101 | 65 | 100 |
| Seattle | 112 | 65 | 129 |
| Edmonton | 125 | 72 | 131 |
| Toronto | 138 | 96 | 154 |
| Portland | 155 | 83 | 142 |
| San Francisco | 285 | 191 | 182 |
| New York | 352 | 260 | 311 |

Source: Hydro Quebec Comparison of Electricity Prices in Major North American Cities. BC Hydro continues to have amongst the lowest electricity prices in North America for its domestic customers.

## 40. OM&A UNIT COST, MEASURING THE COST OF OPERATING, MAINTAINING AND ADMINISTERING THE SYSTEM PER UNIT OF ENERGY DELIVERED, INCLUDING ALL LABOUR AND MATERIALS

| FISCAL YEAR | BC HYDRO | OM&A UNIT COST ($/GW h) CANADIAN UTILITIES |
|---|---|---|
| 1995/1996 | 8.89 | 9.37 |
| 1996/1997 | 8.03 | 8.61 |
| 1997/1998 | 7.12 | 7.81 |
| 1998/1999 | 6.85 | 7.75 |
| 1999/2000 | 6.65 | 8.11 |

## ECONOMIC INDICATORS (CONTINUED)

### 41. CUSTOMER SATISFACTION RATING FOR CALL CENTRES

| ATTRIBUTES PER CENT | BENCHMARK BC HYDRO | BEST-IN-AVERAGE | BEST-IN-ENERGY | CANADA | QUARTERLY |
|---|---|---|---|---|---|
| Customer Overall Satisfaction | 76 | 67 | 80 | 91 | 1st |
| Ease of Contact | 63 | 51 | 71 | 76 | 2nd |
| Call Resolution | 80 | 60 | 80 | 80 | 1st |
| CSR Courtesy | 89 | 76 | 89 | 94 | 1st |

January 2001 survey.

### 42. PROPORTION OF CUSTOMER CARE CALLS AND SERVICE CALLS ANSWERED WITHIN 30 SECONDS (AVERAGE OF ALL FOUR CALL CENTRES)

| | PER CENT |
|---|---|
| Actual | 76 |
| Target | 80 |

### 43. PUBLIC OPINION

Proportion of survey respondents whose general attitude towards BC Hydro can be summarized as favourable.

| FISCAL YEAR PER CENT | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|
| Actual | 65 | 63 | 59 |
| Target | 58 | 60 | 60 |

Actual results were slightly lower than target and previous year largely due to this year's increase in the natural gas rates and the misperception of BC Hydro's role and relationship to BC Gas.

### 44. CUSTOMER SATISFACTION RATING

| SCALE 0 – 10, 0 BEING LEAST SATISFIED | RESIDENTIAL | COMMERCIAL | TOP 1000 |
|---|---|---|---|
| Actual | 8.0 | 7.6 | 7.4 |
| Target | 8.0 | 7.4 | 7.2 |

Customer satisfaction rating: 0 – 10 scale, 0 being least satisfied when responding to the question "How satisfied are you with BC Hydro?"

# HOW ARE WE DOING?

BC Hydro operates our system to provide British Columbians with safe, secure and efficient supplies of electricity. Our move toward sustainability is meant to enhance this commitment to our customers and stakeholders, at the same time as we ensure future generations will continue to enjoy the benefits of responsible management of B.C.'s natural resources.

The information presented in this report highlights some of the programs and activities carried out in 2000/2001 to strengthen our business across the three bottom lines. The report also looks at some of the challenges we face and actions we will take over the next few years as we continue our journey to become one of North America's leading sustainable energy companies.

We are firmly committed to improving our performance. Other the next year, through our Sustainability Action Plan initiatives, we will renew our focus on research and strategies to help us integrate triple bottom line thinking into our business practices. Consultation processes will help us gain a better understanding of how people expect us to demonstrate sustainability, how we report on our performance and how we interact with our stakeholders.

Your feedback on this report and our commitment to become a sustainable energy company is important to us. Please e-mail your comments to sustainability@bchydro.com or contact us by mail, fax or phone.

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